

**Integrated Resource Plan**

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**Appendix**

**9A**

**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

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- 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 period<sup>1</sup> 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.

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



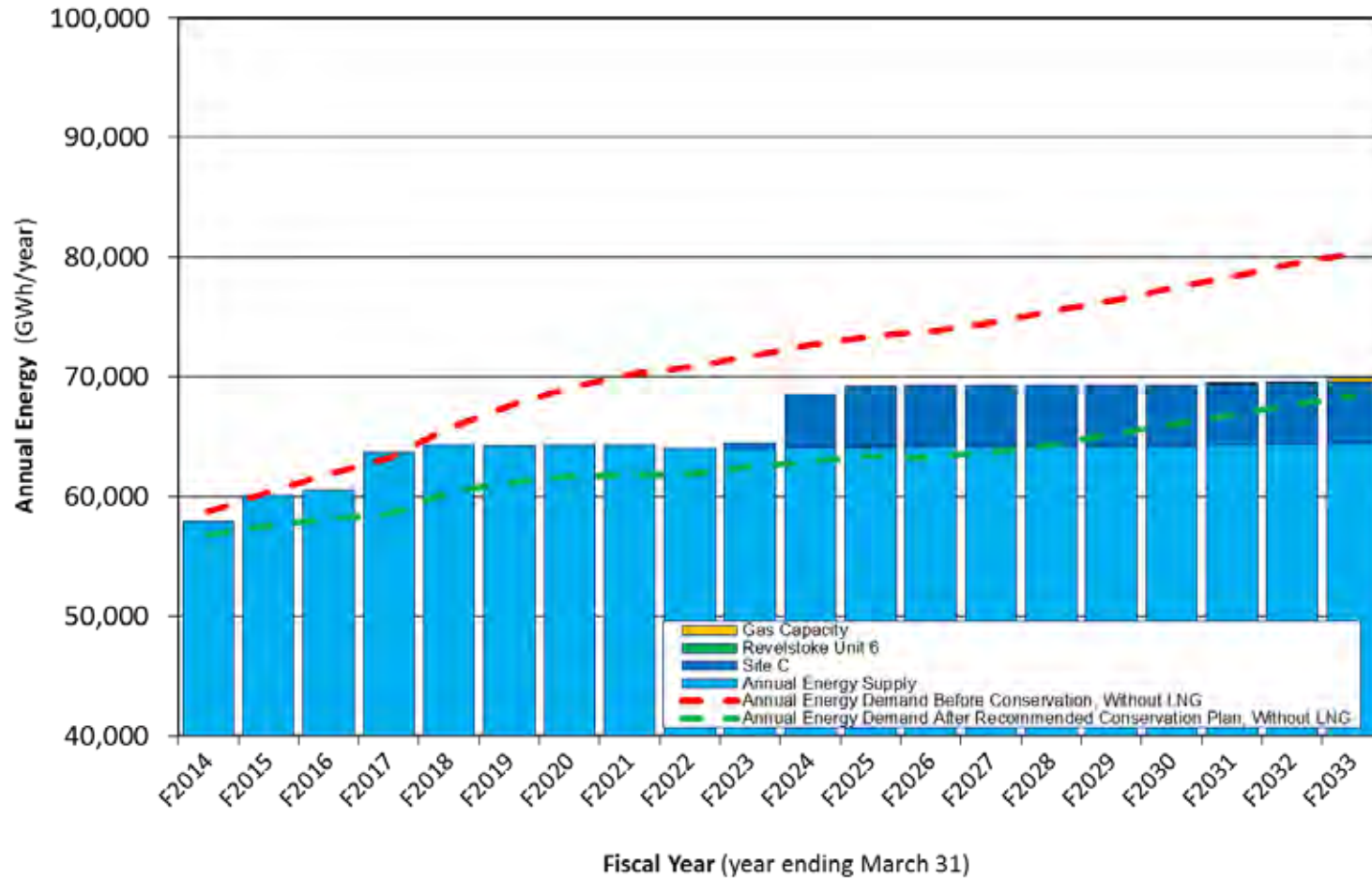


Table 3 BRP without LNG – Energy

(GWh)	Operating										Planning									
	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033
<b>Existing and Committed Heritage Resources</b>																				
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
<b>Existing and Committed IPP Resources</b>																				
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
<b>Future Supply-Side Resources</b>																				
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	80	159	239	318	398	477	557	636	716	795	875	954	1,034	1,113	1,193	1,272	1,352	1,431
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	300
Clean Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1,176	1,306	1,484	1,888	2,248	2,468	2,841	5,549	9,988	11,012	11,251	11,469	11,764	12,281	12,609	12,784	12,948	13,380
<b>Total Supply</b> (d) = a + b + c	57,876	60,084	60,543	63,683	64,294	64,196	64,331	64,269	64,055	64,453	68,528	69,233	69,293	69,336	69,305	69,282	69,344	69,437	69,528	69,907
<b>Demand - Integrated System Total Gross Requirements</b>																				
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
<b>Future Demand Side Management &amp; Other Measures</b>																				
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
<b>Surplus / Deficit prior to LNG</b> (g) = d + e + f	1,119	2,533	2,480	5,147	3,884	3,040	2,631	2,497	2,155	1,926	5,602	5,886	5,968	5,584	4,925	4,071	3,332	2,655	1,854	1,494



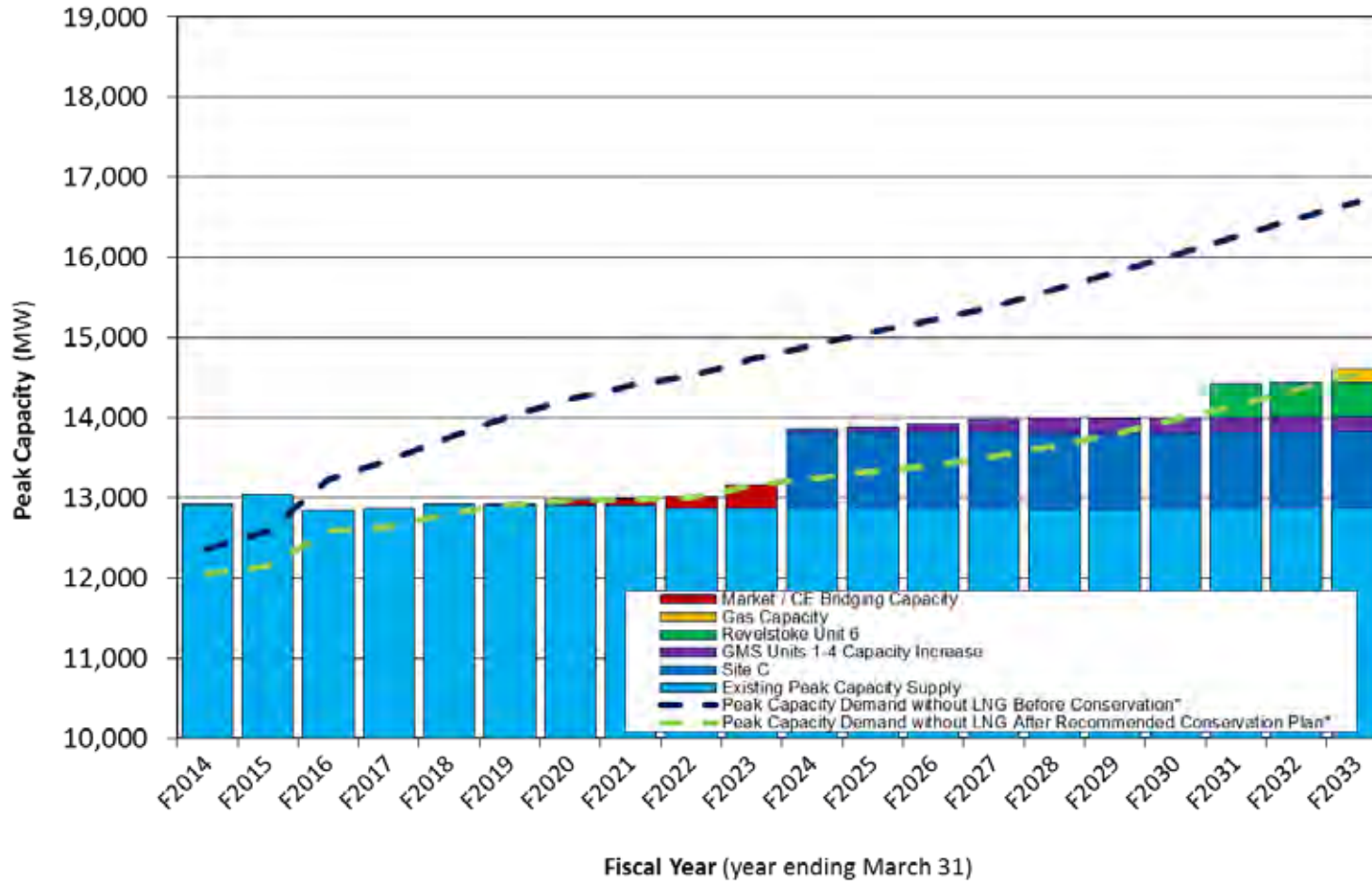
**Figure 1 BRP without LNG – Energy**



**Table 4 BRP 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
<b>Existing and Committed Heritage Resources</b>																						
	Heritage Hydroelectric		10,182	10,182	10,077	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956
	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	11,429	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468
<b>Existing and Committed IPP Resources</b>																						
	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	86	75	73	73	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	162
	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
<b>Future Supply-Side Resources</b>																						
	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	6	13	19	25	32	38	44	51	57	63	70	76	82	89	95	101	107	114
	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	196
	Clean Resources		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sub-total	(c)	16	126	135	146	165	202	257	276	324	613	1,770	1,837	1,899	1,950	2,029	2,056	2,068	2,562	2,573	2,781
	Total Supply Requiring Reserves	(d) = a + b + c	12,495	12,615	12,693	12,719	12,771	12,750	12,755	12,749	12,714	12,711	13,862	13,900	13,944	13,994	14,027	14,022	14,029	14,523	14,529	14,731
<b>Reserves</b>																						
	14% of Supply Requiring Reserves	-14% *d	-1,749	-1,766	-1,777	-1,781	-1,788	-1,785	-1,786	-1,785	-1,780	-1,780	-1,941	-1,946	-1,952	-1,959	-1,964	-1,963	-1,964	-2,033	-2,034	-2,062
	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	-1,777	-1,781	-1,788	-1,785	-1,786	-1,785	-1,780	-1,780	-1,941	-1,946	-1,952	-1,959	-1,964	-1,963	-1,964	-2,033	-2,034	-2,062
<b>Supply Not Requiring Reserves</b>																						
	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	8	61	82	145	286	0	0	0	0	0	0	0	0	0	0
	Sub-total	(f)	419	419	153	153	153	162	214	235	298	440	153	153	153	153	153	153	153	153	153	153
	Effective Load Carrying Capability	(g) = d + e + f	11,565	11,668	11,069	11,092	11,137	11,126	11,184	11,199	11,232	11,371	12,075	12,108	12,145	12,189	12,216	12,213	12,218	12,643	12,648	12,822
<b>Demand - Integrated System Peak</b>																						
	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
<b>Future Demand Side Management &amp; Other Measures</b>																						
	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	256	239	115	0	0	(0)	(0)	0	619	559	527	453	348	192	19	265	81	58

**Figure 2 BRP without LNG – Capacity**

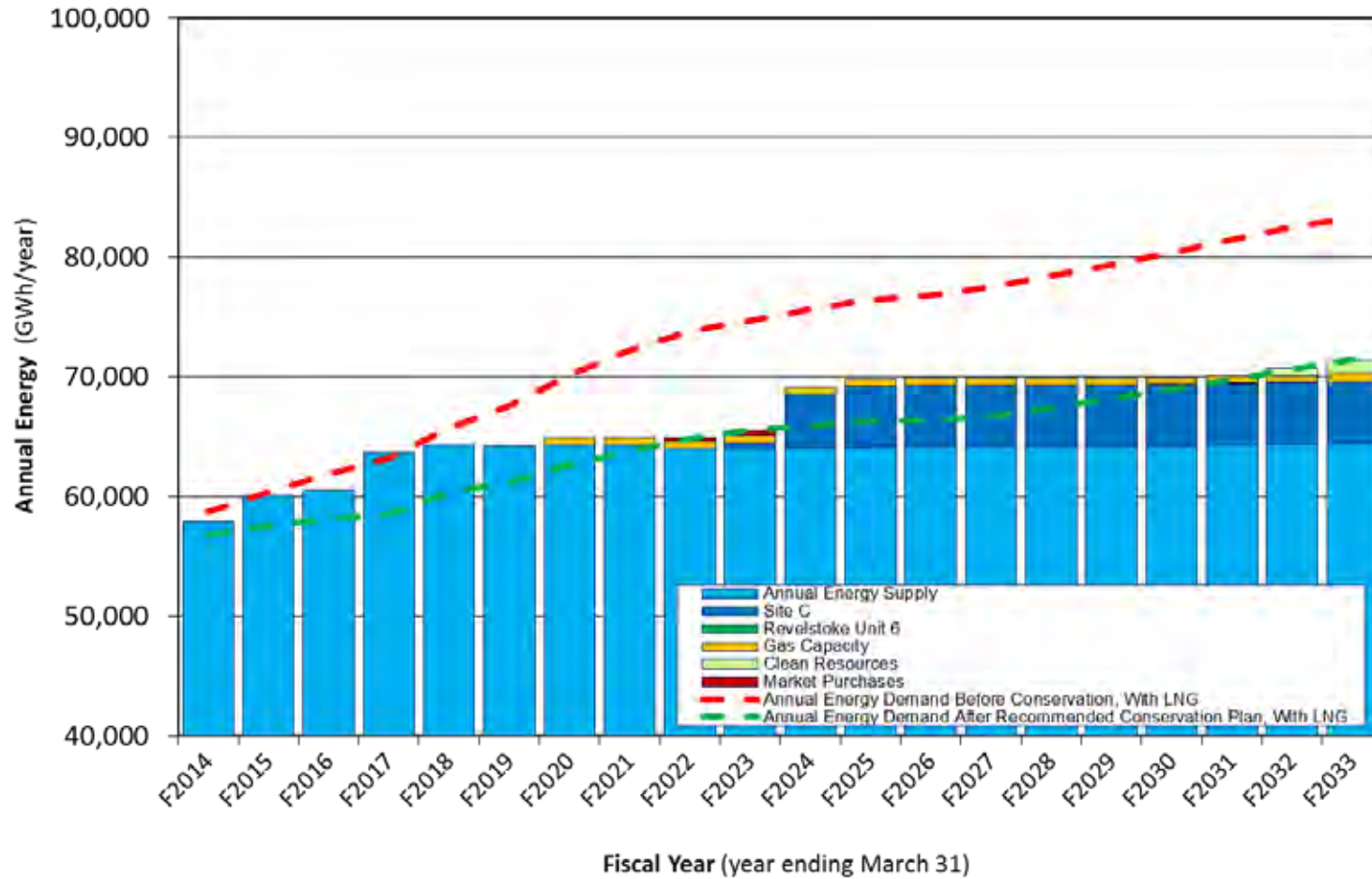


\* including planning reserve requirements

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	
<b>Existing and Committed Heritage Resources</b>																					
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	
<b>Existing and Committed IPP Resources</b>																					
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	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	2,234	
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	
<b>Future Supply-Side Resources</b>																					
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	80	159	239	318	398	477	557	636	716	795	875	954	1,034	1,113	1,193	1,272	1,352	1,431	
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	13	26	26	26	26	
Gas Capacity	0	0	0	0	0	0	600	600	600	600	600	600	600	600	600	600	600	600	600	750	
Clean Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	547	1,074	
Market Purchases	0	0	0	0	0	0	0	0	245	474	0	0	0	0	0	0	0	0	0	0	
Sub-total (c)	88	654	1,176	1,306	1,484	1,888	2,848	3,068	3,686	6,622	10,588	11,612	11,851	12,069	12,364	12,881	13,222	13,397	14,095	14,904	
<b>Total Supply</b> (d) = a + b + c	57,876	60,084	60,543	63,683	64,294	64,196	64,931	64,869	64,900	65,527	69,128	69,833	69,893	69,936	69,905	69,882	69,957	70,050	70,675	71,431	
<b>Demand - Integrated System Total Gross Requirements</b>																					
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
Expected LNG Load		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
<b>Future Demand Side Management &amp; Other Measures</b>																					
SMI Theft Reduction		0	0	0	65	129	193	256	318	380	442	503	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	10,995	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
<b>Surplus / Deficit with LNG</b> (h) = d + f + g		1,119	2,533	2,480	5,147	3,884	3,040	2,231	1,097	0	0	3,202	3,486	3,568	3,184	2,525	1,671	945	268	1	18

**Figure 3 BRP with LNG – Energy**

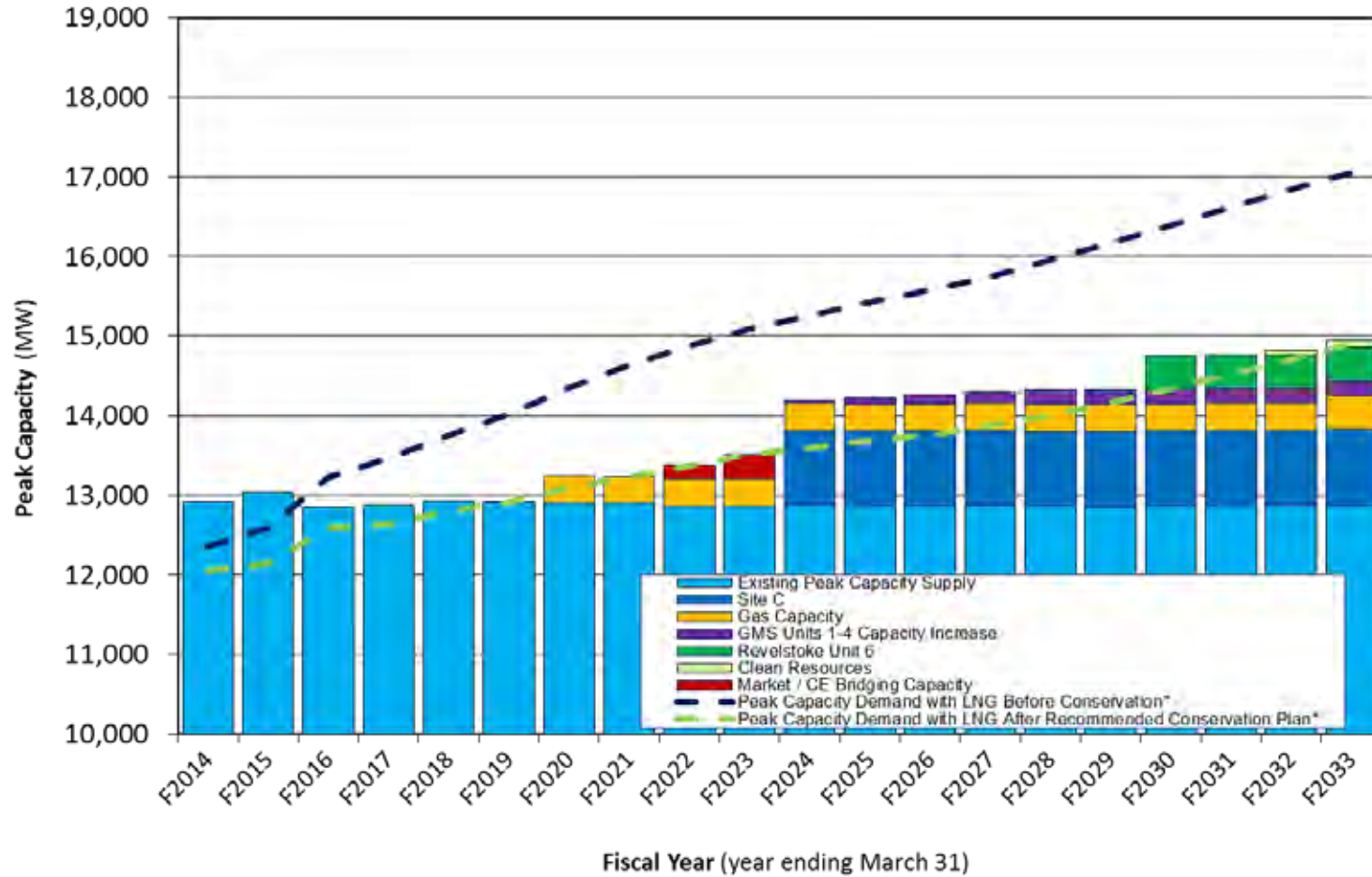


**Table 6 BRP with LNG – Capacity**

(MW)			Operating							Planning												
			F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033
<b>Existing and Committed Heritage Resources</b>																						
	Heritage Hydroelectric		10,182	10,182	10,077	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956
	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	11,429	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468
<b>Existing and Committed IPP Resources</b>																						
	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	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	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
<b>Future Supply-Side Resources</b>																						
	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	6	13	19	25	32	38	44	51	57	63	70	76	82	89	95	101	107	114
	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	0	0	0	0	0	0	0	0	0	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	0	0	392	392	392	392	392	392	392	392	392	392	392	392	490	
	Clean Resources		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	115
	Sub-total	(c)	16	126	135	146	165	202	649	668	716	1,005	2,162	2,229	2,291	2,342	2,421	2,448	2,948	2,954	3,031	3,190
	Total Supply Requiring Reserves	(d) = a + b + c	12,495	12,615	12,693	12,719	12,771	12,750	13,147	13,141	13,106	13,103	14,254	14,292	14,336	14,386	14,419	14,414	14,909	14,915	14,987	15,141
<b>Reserves</b>																						
	14% of Supply Requiring Reserves	-14% *d	-1,749	-1,766	-1,777	-1,781	-1,788	-1,785	-1,841	-1,840	-1,835	-1,834	-1,996	-2,001	-2,007	-2,014	-2,019	-2,018	-2,087	-2,088	-2,098	-2,120
	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	-1,777	-1,781	-1,788	-1,785	-1,841	-1,840	-1,835	-1,834	-1,996	-2,001	-2,007	-2,014	-2,019	-2,018	-2,087	-2,088	-2,098	-2,120
<b>Supply Not Requiring Reserves</b>																						
	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	8	0	0	168	310	0	0	0	0	0	0	0	0	0	0
	Sub-total	(f)	419	419	153	153	153	162	153	321	463	153	153	153	153	153	153	153	153	153	153	153
	Effective Load Carrying Capability	(g) = d + e + f	11,565	11,668	11,069	11,092	11,137	11,126	11,460	11,454	11,592	11,732	12,412	12,445	12,482	12,526	12,553	12,550	12,975	12,980	13,042	13,174
<b>Demand - Integrated System Peak</b>																						
	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
<b>Future Demand Side Management &amp; Other Measures</b>																						
	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	256	239	115	0	156	15	0	0	595	535	503	429	325	168	415	242	114	49



**Figure 4 BRP with LNG – Capacity**



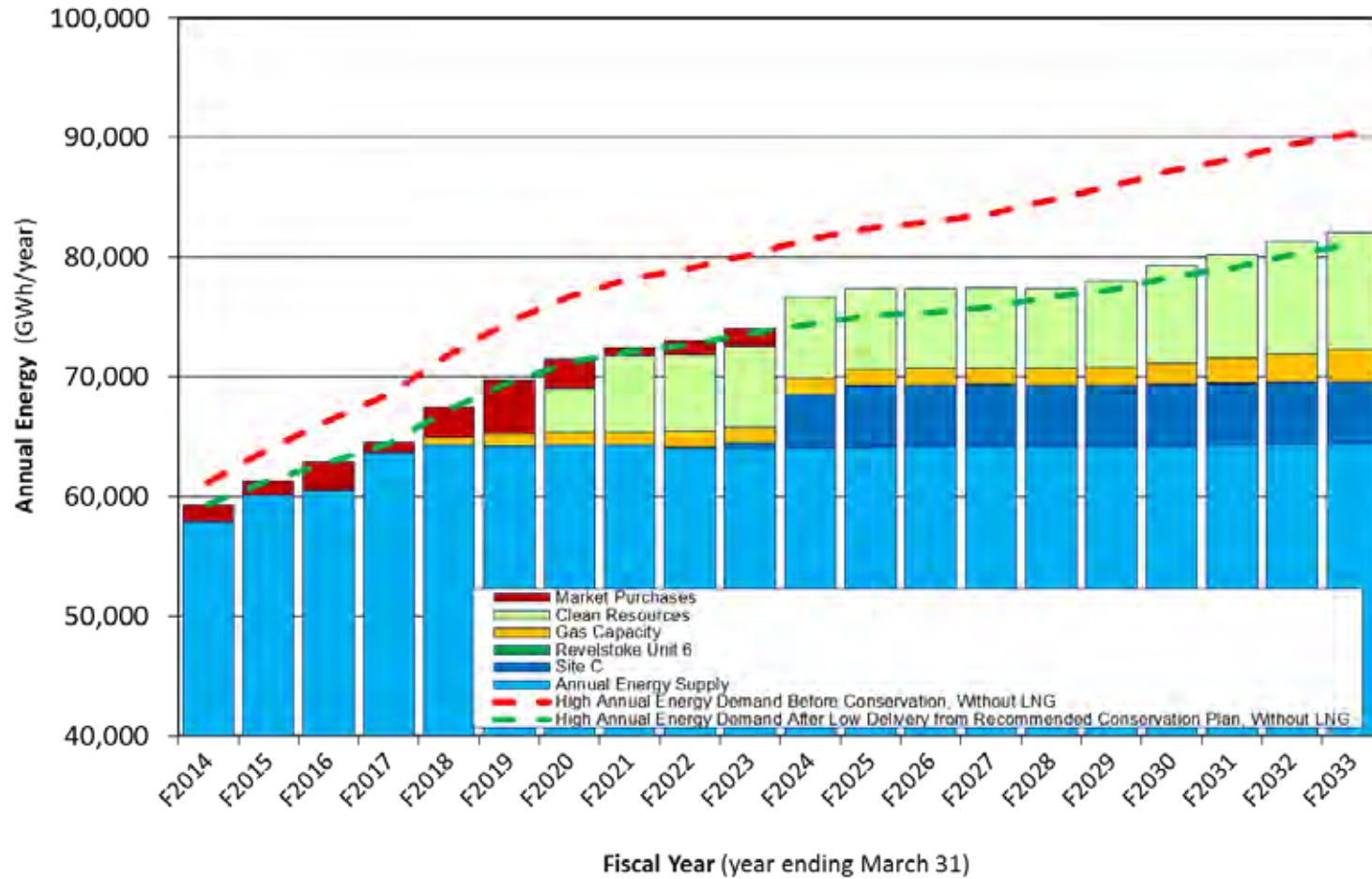
\* including planning reserve requirements

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	
<b>Existing and Committed Heritage Resources</b>																					
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	
<b>Existing and Committed IPP Resources</b>																					
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	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	
<b>Future Supply-Side Resources</b>																					
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	80	159	239	318	398	477	557	636	716	795	875	954	1,034	1,113	1,193	1,272	1,352	1,431	
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	3,560	2,147	4,667	7,445	9,377	10,690	11,821	15,172	18,096	19,121	19,359	19,577	19,872	21,025	22,556	23,524	24,763	25,539	
<b>Total Supply</b> (d) = a + b + c	59,312	61,346	62,927	64,524	67,477	69,753	71,460	72,491	73,036	74,077	76,636	77,341	77,401	77,444	77,413	78,027	79,292	80,176	81,343	82,066	
<b>Demand - Integrated System Total Gross Requirements</b>																					
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
<b>Future Demand Side Management &amp; Other Measures</b>																					
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	
<b>Surplus / Deficit prior to LNG</b> (g) = d + e + f	(0)	(0)	53	106	159	212	265	318	371	424	2,174	2,191	2,015	1,597	725	792	929	1,088	1,092	996	



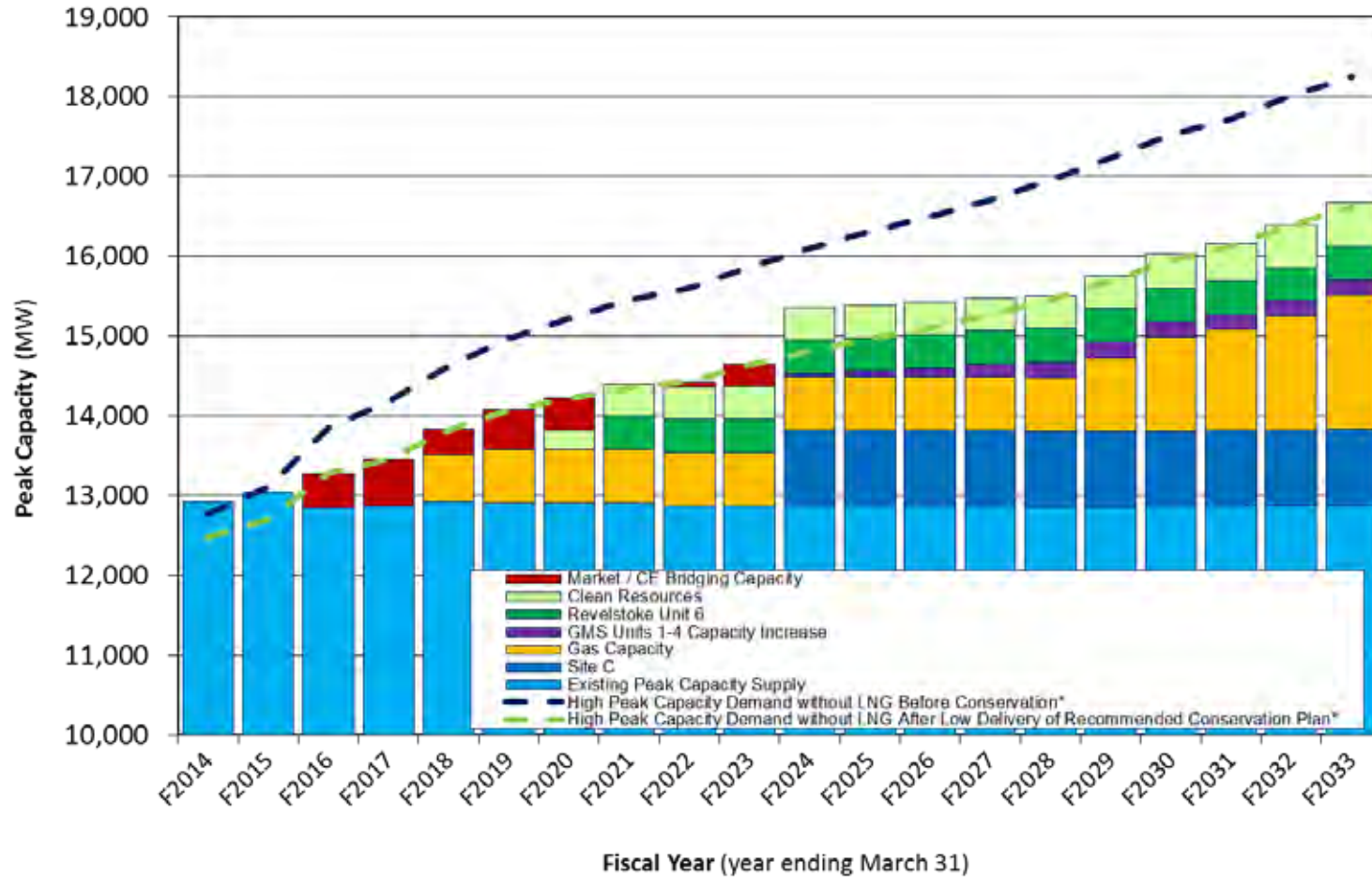
**Figure 5 CRP without LNG – Energy**



**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	
<b>Existing and Committed Heritage Resources</b>																					
Heritage Hydroelectric	10,182	10,182	10,077	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956
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	11,429	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468
<b>Existing and Committed IPP Resources</b>																					
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	75	73	73	69	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	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	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	483
<b>Future Supply-Side Resources</b>																					
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	6	13	19	25	32	38	44	51	57	63	70	76	82	89	95	101	107	114	114
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	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	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	220
Gas Capacity	0	0	0	0	686	784	784	784	784	784	784	784	784	784	784	784	1,078	1,372	1,470	1,666	1,960
Clean Resources	0	0	0	0	0	0	264	463	463	475	475	475	475	475	475	475	501	546	622	650	650
Sub-total	(c)	16	126	135	146	851	986	1,305	2,011	2,059	2,360	3,517	3,584	3,646	3,697	3,776	4,097	4,429	4,579	4,861	5,195
Total Supply Requiring Reserves	(d) = a + b + c	12,495	12,615	12,693	12,719	13,457	13,534	13,803	14,484	14,449	14,459	15,609	15,647	15,691	15,742	15,774	16,063	16,390	16,540	16,817	17,145
<b>Reserves</b>																					
14% of Supply Requiring Reserves	-14% *d	-1,749	-1,766	-1,777	-1,781	-1,884	-1,895	-1,932	-2,028	-2,023	-2,024	-2,185	-2,191	-2,197	-2,204	-2,208	-2,249	-2,295	-2,316	-2,354	-2,400
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	-1,777	-1,781	-1,884	-1,895	-1,932	-2,028	-2,023	-2,024	-2,185	-2,191	-2,197	-2,204	-2,208	-2,249	-2,295	-2,316	-2,354	-2,400
<b>Supply Not Requiring Reserves</b>																					
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	431	583	309	498	413	0	68	278	0	0	0	0	0	0	0	0	0	0
Sub-total	(f)	419	419	585	737	462	651	567	153	221	431	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	12,610	12,647	12,866	13,577	13,610	13,648	13,691	13,719	13,968	14,249	14,377	14,616	14,898
<b>Demand - Integrated System Peak</b>																					
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
<b>Future Demand Side Management &amp; Other Measures</b>																					
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	43	(0)	0	554	419	330	205	45	50	73	37	12	69

**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	
<b>Existing and Committed Heritage Resources</b>																					
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	
<b>Existing and Committed IPP Resources</b>																					
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	
<b>Future Supply-Side Resources</b>																					
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	80	159	239	318	398	477	557	636	716	795	875	954	1,034	1,113	1,193	1,272	1,352	1,431	
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	1,050	1,200	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,500	1,950	2,250	2,400	2,700	3,150	
Clean Resources	0	0	0	0	0	0	4,036	7,119	8,717	9,283	9,283	9,283	9,283	9,283	9,283	9,283	9,745	10,506	11,532	11,532	
Market Purchases	1,436	1,262	2,331	735	1,974	4,144	2,479	1,422	1,517	1,541	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	20,647	21,671	21,909	22,127	22,572	23,540	24,629	25,703	27,180	27,762	
<b>Total Supply</b> (d) = a + b + c	59,312	61,346	62,874	64,418	67,318	69,541	72,195	74,173	75,665	76,653	79,187	79,891	79,952	79,994	80,114	80,541	81,365	82,356	83,760	84,290	
<b>Demand - Integrated System Total Gross Requirements</b>																					
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	
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
<b>Future Demand Side Management &amp; Other Measures</b>																					
SMI Theft Reduction		0	0	0	65	129	193	256	318	380	442	503	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	
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	8,389	
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	9,297	
<b>Surplus / Deficit with LNG</b> (h) = d + f + g		(0)	(0)	0	(0)	0	0	0	0	0	0	1,725	1,741	1,566	1,147	426	307	2	267	509	220

**Figure 7 CRP with LNG – Energy**

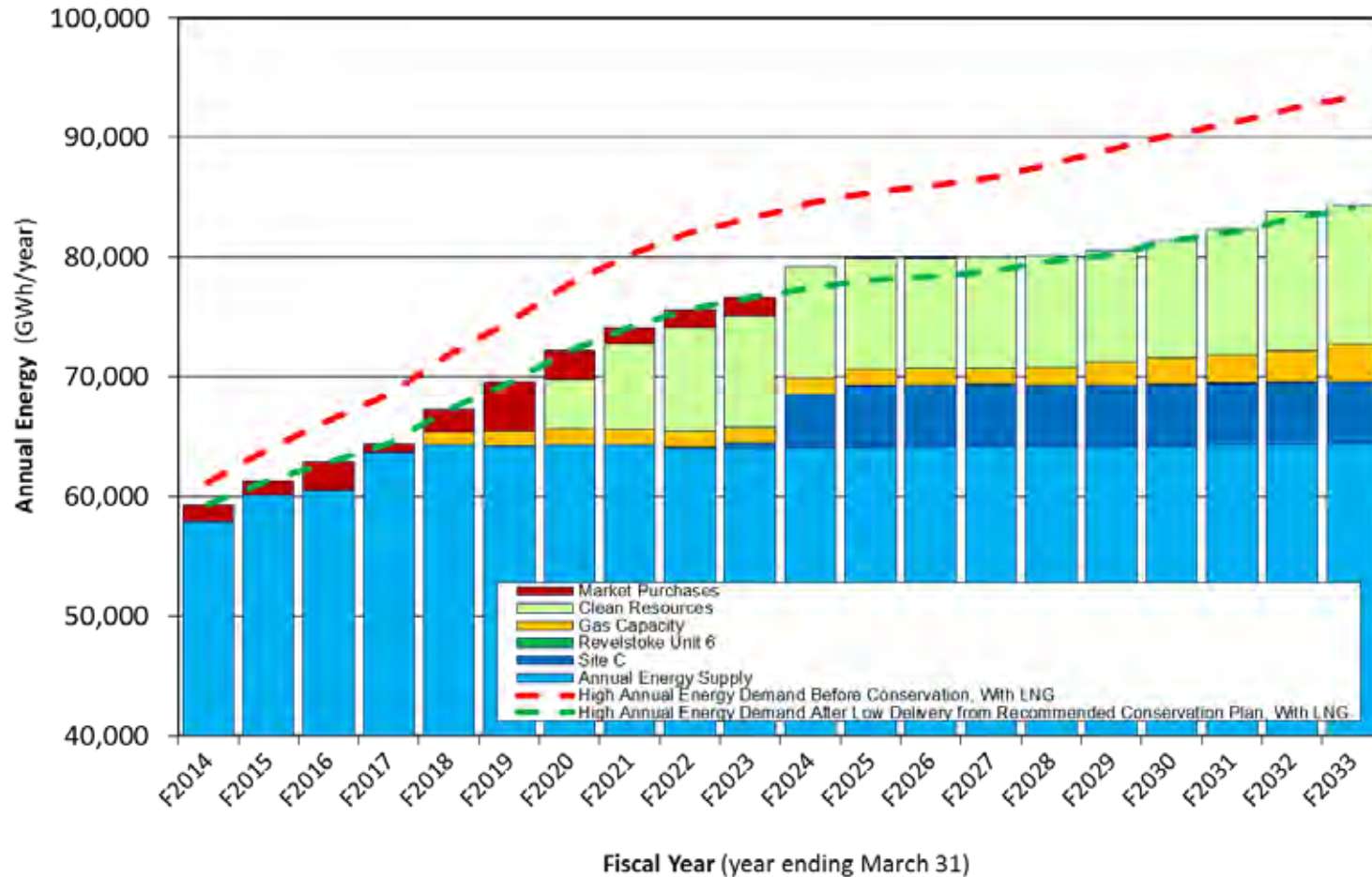
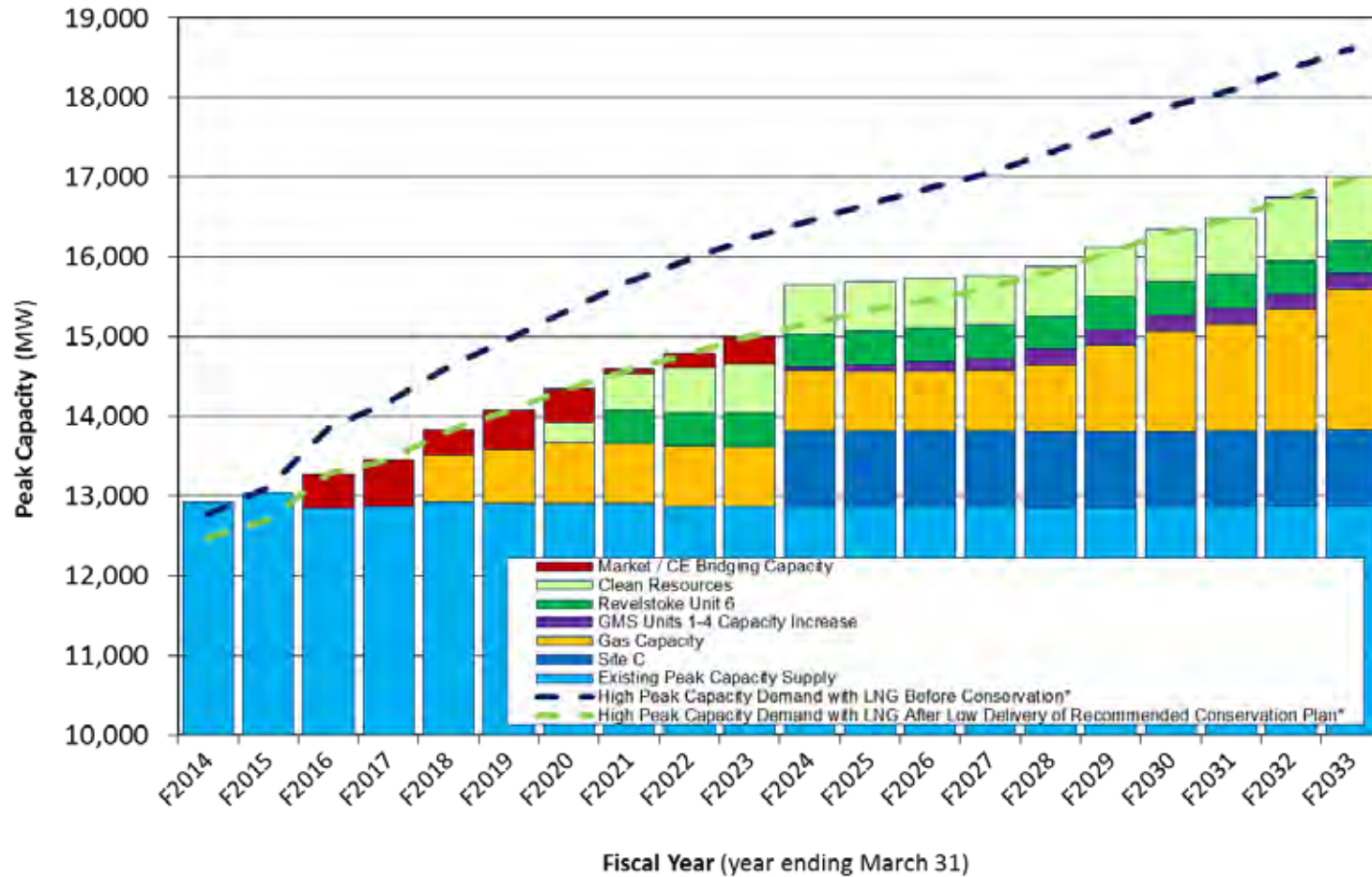




Table 10 CRP with LNG – Capacity

(MW)	Operating										Planning									
	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033
<b>Existing and Committed Heritage Resources</b>																				
Heritage Hydroelectric	10,182	10,182	10,077	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956	9,956
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	11,429	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468	11,468
<b>Existing and Committed IPP Resources</b>																				
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
<b>Future Supply-Side Resources</b>																				
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	6	13	19	25	32	38	44	51	57	63	70	76	82	89	95	101	107	114
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	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	686	784	882	882	882	882	882	882	882	882	980	1,274	1,470	1,568	1,764	2,058
Clean Resources	0	0	0	0	0	0	290	516	650	721	721	721	721	721	721	721	779	842	929	929
Sub-total (c)	16	126	135	146	851	986	1,429	2,162	2,343	2,704	3,860	3,928	3,990	4,040	4,217	4,539	4,804	4,972	5,266	5,572
Total Supply Requiring Reserves (d) = a + b + c	12,495	12,615	12,693	12,719	13,457	13,534	13,927	14,634	14,733	14,802	15,952	15,991	16,035	16,085	16,215	16,505	16,765	16,933	17,222	17,522
<b>Reserves</b>																				
14% of Supply Requiring Reserves -14% *d	-1,749	-1,766	-1,777	-1,781	-1,884	-1,895	-1,950	-2,049	-2,063	-2,072	-2,233	-2,239	-2,245	-2,252	-2,270	-2,311	-2,347	-2,371	-2,411	-2,453
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	-1,777	-1,781	-1,884	-1,895	-1,950	-2,049	-2,063	-2,072	-2,233	-2,239	-2,245	-2,252	-2,270	-2,311	-2,347	-2,371	-2,411	-2,453
<b>Supply Not Requiring Reserves</b>																				
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	431	583	309	498	427	68	184	343	0	0	0	0	0	0	0	0	0	0
Sub-total (f)	419	419	585	737	462	651	580	221	337	496	153	153	153	153	153	153	153	153	154	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	13,872	13,906	13,943	13,987	14,098	14,348	14,572	14,716	14,965	15,222
<b>Demand - Integrated System Peak</b>																				
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
<b>Future Demand Side Management &amp; Other Measures</b>																				
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	489	354	265	140	64	69	35	14	0	33

**Figure 8 CRP with LNG – Capacity**



\* including planning reserve requirements