

1 Q. Reference: Interim Rate Application filed November 18, 2013, RFI VNLH-002
2 V-NLH-0002 shows that, based on Hydro's proposed phase-in, the forecast
3 drawdown during the phase in period will be \$11,349,783 for the industrial
4 customers (excluding Teck). Vale has taken the position that a proper interpretation
5 of Order in Council OC 2013-89, is that the phase in of rates is to occur over "a three
6 year period", and that the phase in should end on August 31,2016 as opposed to
7 August 31, 2015 as assumed by Hydro. Please assume that the Board accepts Vale's
8 interpretation of OC 2013-89 on the length of the phase in and provide the forecast
9 drawdown for each of Vale, CBPP, NARL and Praxair using a phase in period that
10 ends on August 31, 2016 as opposed to August 31, 2015.

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13 A. The total forecast drawdown for the Industrial Customers is \$16,851,150 based on
14 the stated premise that the phase-in period ends August 31, 2016 as opposed to
15 August 31, 2015. The supporting calculations for IC excluding Teck and Teck are
16 provided in IR-V-NLH-023 Attachments 1 to 4. The forecast drawdown for each of
17 Vale, CBPP, NARL and Praxair is shown in the response to IR-V-NLH-026.

Newfoundland and Labrador Hydro
 Estimated Industrial Customer Phase-In Rates for the 2013 to 2016 effective September 1, 2013
 Industrial Customers excluding Teck Resources

Line No	A	B		C	D	E	
	2013 Test Year	Existing Revenue including RSP at August 31 2013		Revenue	Proposed Test Year Revenue	Revenue	Reference
	Units	Rate		A x B	Rate	A x D	
Step 1: Determine Annual Percentage Increase							
1	Demand	721,400 kW	6.68 \$/kW/mo	\$4,818,952	9.13 \$/kW/mo	\$6,586,382	
2	Energy	336,600 MWh	36.76 mills/kWh	\$12,373,416	47.82 mills/kWh	\$16,096,212	
3	Specifically Assigned Charges			\$498,143		\$1,580,426	
4	Subtotal			\$17,690,511		\$24,263,020	Line 1 to 3
5	RSP (Teck, Vale, and Praxair)	38,600 MWh	(20.00) mills/kWh	(\$772,000)	mills/kWh	\$0	
6	RSP (Other Industrial Customers excluding Teck, Vale, and Praxair)	298,000 MWh	(7.85) mills/kWh	(\$2,339,300)	mills/kWh	\$0	
7	Total	336,600 MWh		\$14,579,211		\$24,263,020	Line 4 to 6
8	Difference between Total Proposed Test Year Revenue and Existing					(\$9,683,809)	Line 7, Col C less Line 7, Col E
9	mills/kWh			43.31		72.08	Line 7/Line 2, Col A
10	Annual Required Increase					13.6%	See Note 1
Phase-In Industrial Customer Rates							
		F	G	H	I		
		September 1	September 1	September 1	September 1		
	Existing Rates	2013	2014	2015	2016		
		Col F * (1 + Col E), Line 10		Col G * (1 + Col E), Line 10		2013 Test Year	
Step 2: Calculate 3-Year (Interim) Phase-In Rate Components							
11	Demand (\$/kW/month)	6.68	6.68	7.59	8.62	9.13	
12	Energy (mills/kWh)	36.76	36.76	41.76	47.44	47.82	
13	RSP (mills/kWh)	(7.85)					
14	Specifically Assigned Charges	\$498,143	\$498,143	\$565,890	\$642,852	\$1,580,426	
Revenue at Proposed Rates							
		J	K	L	M		
	Existing Rates	September 1	September 1	September 1	September 1		
		2013	2014	2015	2016		
Step 3: Revenue Proof							
15	Demand	\$4,818,952	\$4,818,952	\$5,475,426	\$6,218,468	\$6,586,382	Line 11 x Line 1, Col A
16	Energy	\$12,373,416	\$12,373,416	\$14,056,416	\$15,968,304	\$16,096,212	Line 12 x Line 2, Col A
17	Specifically Assigned Charges	\$498,143	\$498,143	\$565,890	\$642,852	\$1,580,426	Line 14
18	Subtotal	\$17,690,511	\$17,690,511	\$20,097,732	\$22,829,624	\$24,263,020	Line 15 to 17
19	RSP	(\$3,111,300)					Line 13 x Line 5, Col A
20	Total	\$14,579,211	\$17,690,511	\$20,097,732	\$22,829,624	\$24,263,020	Line 18 to 19
21	% Change year over year	21.3%	13.6%	13.6%	13.6%	6.3%	

Note (1): ((43.31 mills per kWh/72.08 mills per kWh)^(1/(2012-2016)))-1

Newfoundland and Labrador Hydro
Estimated Industrial Customer Phase-In Rates for the 2013 to 2016 effective September 1, 2013
Teck Resources

Line No	A	B	C	D	E		
	Existing Revenue including RSP at August 31 2013		Proposed Test Year Revenue		Calculation		
	Units	Rate	Revenue	Rate	Revenue		
			A x C		A x F		
Step 1: Determine Annual Increase							
1	Demand	114,000 kW	6.68 \$/kW/mo	\$761,520	9.13 \$/kW/mo	\$1,040,820	
2	Energy	71,800 MWh	36.76 mills/kWh	\$2,639,368	47.82 mills/kWh	\$3,433,476	
3	Specifically Assigned Charges			\$186,169		\$215,009	
4	Subtotal			\$3,587,057		\$4,689,305	
5	RSP	71,800 MWh	(20.00) mills/kWh	(\$1,436,000)	mills/kWh	\$0	
6	Total			\$2,151,057		\$4,689,305	
7	Difference between Total Proposed Test Year and Existing					(\$2,538,248)	
8	mills/kWh			29.96		65.31	
9	Annual Required Increase					21.5%	
						See Note 1	
Step 2: Determine Annual Revenue Requirement							
10	Amounts required to achieve 21.5% increase year over year	Existing Rates	F 2013	G 2014	H 2015	I 2016	
11	Revised Total to be paid by Teck Resources		\$ 462,692	\$ 562,217	\$ 683,150	\$ 830,188	Line 11 x (1 + Line 9, Col E)
			\$ 2,151,057	\$ 2,613,749	\$ 3,175,967	\$ 4,689,305	Line 6, Col C plus Line 10
Step 3: Determine Teck Resources rate effective September 1, 2013							
12	Revised RSP allocation required		\$ (973,308)				Line 5, Col C plus Line 10, Col F
13	Teck Resources RSP Surplus Adjustment rate effective September 1, 2013		(13.56) mills/kWh				Line 12/Line 5, Col A
Step 4: Calculate 3-Year (Interim) Phase-In Rate Components							
			J September 1 2013	K September 1 2014	L September 1 2015	M September 1 2016	
14	Demand (\$/kW/month)	6.68	6.68	8.12	9.87	9.13	
15	Energy (mills/kWh)	36.76	36.76	28.20	34.27	47.82	
16	Energy Rate Adjustment (mills/kWh)		(13.56)				Line 13, Col F
17	Net Energy Rate	36.76	23.20	28.20	34.27	47.82	
18	RSP (mills/kWh)	(20.00)					
19	Specifically Assigned Charges	\$186,169	\$186,169	\$226,214	\$274,873	\$215,009	
Step 5: Revenue Requirement Proof							
			N September 1 2013	O September 1 2014	P September 1 2015	Q September 1 2016	
20	Demand	\$761,520	\$761,520	\$925,680	\$1,125,180	\$1,040,820	Line 14 x Line 1, Col A
21	Energy	\$2,639,368	\$2,639,368	\$2,024,760	\$2,460,586	\$3,433,476	Line 15 x Line 2, Col A
22	Energy Adjustment		(\$973,308)				Line 12, Col F
23	Specifically Assigned Charges	\$186,169	\$186,169	\$226,214	\$274,873	\$215,009	Line 19
24	Subtotal	\$3,587,057	\$2,613,749	\$3,176,654	\$3,860,639	\$4,689,305	Line 20 to 23
25	RSP	(\$1,436,000)					Line 18 x Line 5, Col A
26	Total	\$2,151,057	\$2,613,749	\$3,176,654	\$3,860,639	\$4,689,305	Line 24 to 25
27	% Change year over year		21.5%	21.5%	21.5%	21.5%	

Note (1): ((29.96 mills per kWh/65.31 mills per kWh))^(1/(2012-2016))-1

Newfoundland and Labrador Hydro
Forecast drawdown of RSP credit for Industrial Customers excluding Teck for 2014 to 2016

Line No	A Billing Units		C Forecast Revenue using Proposed Phase-in Rates						I Forecast Revenue using Proposed 2013 Test Year Rates						O RSP Drawdown (\$)			
	Demand kW	Energy MWh	D Demand Charge \$/kW/mo.	D Energy Rate mills/kWh	E		F		G Assigned Charges (\$)	H Total Revenue (\$)	I Demand Charge \$/kW/mo.	J Energy Rate mills/kWh	K			L Assigned Charges (\$)	M Total Revenue (\$)	N (K + L + M)
					Demand (\$)	Energy (\$)	Demand (\$)	Energy (\$)					Demand (\$)	Energy (\$)				
2014																		
1	January	68,500	37,700	6.68	36.76	457,580	1,385,852	41,512	1,884,944	9.13	47.82	625,405	1,802,814	131,702	2,559,921	674,977		
2	February	68,500	34,000	6.68	36.76	457,580	1,249,840	41,512	1,748,932	9.13	47.82	625,405	1,625,880	131,702	2,382,987	634,055		
3	March	69,500	38,500	6.68	36.76	464,260	1,415,260	41,512	1,921,032	9.13	47.82	634,535	1,841,070	131,702	2,607,307	686,275		
4	April	72,500	39,500	6.68	36.76	484,300	1,452,020	41,512	1,977,832	9.13	47.82	661,925	1,888,890	131,702	2,682,517	704,685		
5	May	73,500	41,400	6.68	36.76	490,980	1,521,864	41,512	2,054,356	9.13	47.82	671,055	1,979,748	131,702	2,782,505	728,149		
6	June	75,500	41,600	6.68	36.76	504,340	1,529,216	41,512	2,075,068	9.13	47.82	689,315	1,989,312	131,702	2,810,329	735,261		
7	July	84,500	49,400	6.68	36.76	564,460	1,815,944	41,512	2,421,916	9.13	47.82	771,485	2,362,308	131,702	3,265,495	843,579		
8	August	84,500	49,400	6.68	36.76	564,460	1,815,944	41,512	2,421,916	9.13	47.82	771,485	2,362,308	131,702	3,265,495	843,579		
9	September	94,500	54,900	7.59	41.76	717,255	2,292,624	47,158	3,057,037	9.13	47.82	862,785	2,625,318	131,702	3,619,805	562,769		
10	October	94,500	56,700	7.59	41.76	717,255	2,367,792	47,158	3,132,205	9.13	47.82	862,785	2,711,394	131,702	3,705,881	573,677		
11	November	94,500	54,900	7.59	41.76	717,255	2,292,624	47,158	3,057,037	9.13	47.82	862,785	2,625,318	131,702	3,619,805	562,769		
12	December	94,500	56,700	7.59	41.76	717,255	2,367,792	47,158	3,132,205	9.13	47.82	862,785	2,711,394	131,702	3,705,881	573,677		
																8,123,453		
2015																		
13	January	96,500	59,500	7.59	41.76	732,435	2,484,720	47,158	3,264,313	9.13	47.82	881,045	2,845,290	131,702	3,858,037	593,725		
14	February	96,500	54,200	7.59	41.76	732,435	2,263,392	47,158	3,042,985	9.13	47.82	881,045	2,591,844	131,702	3,604,591	561,607		
15	March	101,500	63,200	7.59	41.76	770,385	2,639,232	47,158	3,456,775	9.13	47.82	926,695	3,022,224	131,702	4,080,621	623,847		
16	April	101,500	60,300	7.59	41.76	770,385	2,518,128	47,158	3,335,671	9.13	47.82	926,695	2,883,546	131,702	3,941,943	606,273		
17	May	101,500	63,200	7.59	41.76	770,385	2,639,232	47,158	3,456,775	9.13	47.82	926,695	3,022,224	131,702	4,080,621	623,847		
18	June	101,500	61,300	7.59	41.76	770,385	2,559,888	47,158	3,377,431	9.13	47.82	926,695	2,931,366	131,702	3,989,763	612,333		
19	July	107,500	67,500	7.59	41.76	815,925	2,818,800	47,158	3,681,883	9.13	47.82	981,475	3,227,850	131,702	4,341,027	659,145		
20	August	107,500	67,500	7.59	41.76	815,925	2,818,800	47,158	3,681,883	9.13	47.82	981,475	3,227,850	131,702	4,341,027	659,145		
21	September	107,500	49,400	8.62	47.44	926,650	2,343,536	53,571	3,323,757	9.13	47.82	981,475	2,362,308	131,702	3,475,485	151,728		
22	October	112,500	71,200	8.62	47.44	969,750	3,377,728	53,571	4,401,049	9.13	47.82	1,027,125	3,404,784	131,702	4,563,611	162,562		
23	November	113,500	69,700	8.62	47.44	978,370	3,306,568	53,571	4,338,509	9.13	47.82	1,036,255	3,333,054	131,702	4,501,011	162,502		
24	December	116,500	74,200	8.62	47.44	1,004,230	3,520,048	53,571	4,577,849	9.13	47.82	1,063,645	3,548,244	131,702	4,743,591	165,742		
																5,582,454		
2016																		
25	January	116,500	74,600	8.62	47.44	1,004,230	3,539,024	53,571	4,596,825	9.13	47.82	1,063,645	3,567,372	131,702	4,762,719	165,894		
26	February	121,500	70,600	8.62	47.44	1,047,330	3,349,264	53,571	4,450,165	9.13	47.82	1,109,295	3,376,092	131,702	4,617,089	166,924		
27	March	121,500	78,400	8.62	47.44	1,047,330	3,719,296	53,571	4,820,197	9.13	47.82	1,109,295	3,749,088	131,702	4,990,085	169,888		
28	April	125,500	78,800	8.62	47.44	1,081,810	3,738,272	53,571	4,873,653	9.13	47.82	1,145,815	3,768,216	131,702	5,045,733	172,080		
29	May	125,500	81,300	8.62	47.44	1,081,810	3,856,872	53,571	4,992,253	9.13	47.82	1,145,815	3,887,766	131,702	5,165,283	173,030		
30	June	127,500	80,100	8.62	47.44	1,099,050	3,799,944	53,571	4,952,565	9.13	47.82	1,164,075	3,830,382	131,702	5,126,159	173,594		
31	July	128,500	83,500	8.62	47.44	1,107,670	3,961,240	53,571	5,122,481	9.13	47.82	1,173,205	3,992,970	131,702	5,297,877	175,396		
32	August	128,500	83,500	8.62	47.44	1,107,670	3,961,240	53,571	5,122,481	9.13	47.82	1,173,205	3,992,970	131,702	5,297,877	175,396		
																1,372,203		
33	Sub-Total Industrial Customers excluding Teck															15,078,110		

Newfoundland and Labrador Hydro
Forecast drawdown of RSP credit for Teck for 2013 to 2016

Line No	A Billing Units		C Forecast Revenue using Proposed Phase-in Rates						I Forecast Revenue using Proposed 2013 Test Year Rates						M Assigned Charges (\$)	N Total Revenue (\$)	O RSP Drawdown (\$)
	Demand	Energy	Demand Charge	Energy Rate	Demand	Energy	G Specifically Assigned		Demand	Energy	Demand	Energy	Assigned Charges	Total Revenue			
							Charges	Total Revenue									
	kW	MWh	\$/kW/mo.	mills/kWh	(\$)	(\$)	(\$)	(\$)	\$/kW/mo.	mills/kWh	(\$)	(\$)	(\$)	(\$)			
		(A x C)	(B x D)	(E + F + G)	(A x I)	(B x J)	(K + L + M)	(N - H)									
2013																	
1	September	9,500	5,500	6.68	23.20	63,460	127,600	15,514	206,574	6.68	36.76	63,460	202,180	15,514	281,154	74,580	
2	October	9,500	6,000	6.68	23.20	63,460	139,200	15,514	218,174	6.68	36.76	63,460	220,560	15,514	299,534	81,360	
3	November	9,500	6,100	6.68	23.20	63,460	141,520	15,514	220,494	6.68	36.76	63,460	224,236	15,514	303,210	82,716	
4	December	9,500	6,400	6.68	23.20	63,460	148,480	15,514	227,454	6.68	36.76	63,460	235,264	15,514	314,238	86,784	
<u>325,440</u>																	
2014																	
5	January	7,000	3,800	6.68	23.20	46,760	88,160	15,514	150,434	9.13	47.82	63,910	181,716	17,917	263,543	113,109	
6	February	7,000	3,500	6.68	23.20	46,760	81,200	15,514	143,474	9.13	47.82	63,910	167,370	17,917	249,197	105,723	
7	March	7,000	3,800	6.68	23.20	46,760	88,160	15,514	150,434	9.13	47.82	63,910	181,716	17,917	263,543	113,109	
8	April	7,000	3,700	6.68	23.20	46,760	85,840	15,514	148,114	9.13	47.82	63,910	176,934	17,917	258,761	110,647	
9	May	7,000	3,800	6.68	23.20	46,760	88,160	15,514	150,434	9.13	47.82	63,910	181,716	17,917	263,543	113,109	
10	June	7,000	3,700	6.68	23.20	46,760	85,840	15,514	148,114	9.13	47.82	63,910	176,934	17,917	258,761	110,647	
11	July	7,000	3,800	6.68	23.20	46,760	88,160	15,514	150,434	9.13	47.82	63,910	181,716	17,917	263,543	113,109	
12	August	7,000	3,800	6.68	23.20	46,760	88,160	15,514	150,434	9.13	47.82	63,910	181,716	17,917	263,543	113,109	
13	September	7,000	3,700	8.12	28.20	56,840	104,340	18,851	180,031	9.13	47.82	63,910	176,934	17,917	258,761	78,730	
14	October	7,000	3,800	8.12	28.20	56,840	107,160	18,851	182,851	9.13	47.82	63,910	181,716	17,917	263,543	80,692	
15	November	7,000	3,700	8.12	28.20	56,840	104,340	18,851	180,031	9.13	47.82	63,910	176,934	17,917	258,761	78,730	
16	December	7,000	3,800	8.12	28.20	56,840	107,160	18,851	182,851	9.13	47.82	63,910	181,716	17,917	263,543	80,692	
<u>1,211,410</u>																	
2015																	
17	January	7,000	3,800	8.12	28.20	56,840	107,160	18,851	182,851	9.13	47.82	63,910	181,716	17,917	263,543	80,692	
18	February	7,000	3,500	8.12	28.20	56,840	98,700	18,851	174,391	9.13	47.82	63,910	167,370	17,917	249,197	74,806	
19	March	7,000	3,800	8.12	28.20	56,840	107,160	18,851	182,851	9.13	47.82	63,910	181,716	17,917	263,543	80,692	
20	April	0	0	8.12	28.20	0	0	0	0	9.13	47.82	0	0	0	0	0	
21	May	0	0	8.12	28.20	0	0	0	0	9.13	47.82	0	0	0	0	0	
22	June	0	0	8.12	28.20	0	0	0	0	9.13	47.82	0	0	0	0	0	
23	July	0	0	8.12	28.20	0	0	0	0	9.13	47.82	0	0	0	0	0	
24	August	0	0	8.12	28.20	0	0	0	0	9.13	47.82	0	0	0	0	0	
25	September	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
26	October	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
27	November	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
28	December	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
<u>236,191</u>																	
2016																	
29	January	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
30	February	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
31	March	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
32	April	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
33	May	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
34	June	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
35	July	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
36	August	0	0	9.86	34.26	0	0	0	0	9.13	47.82	0	0	0	0	0	
<u>0</u>																	
37	Sub-Total Teck															<u>1,773,040</u>	
38	Total Industrial Customers															<u>16,851,150</u>	