

1 Q. Reference: Hydro's Reply, page 7, lines 11-14. Further to the response to PR-PUB-
2 NLH-129 (Revision 1), please provide a spreadsheet of the calculation that results in
3 estimated replacement costs of \$504,610. In the response include the derivation of
4 the \$1,533,991 total replacement costs for the period referred to on page 2 of the
5 response.

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8 A. Note that in its response to PR-PUB-NLH-129, Hydro had used the costs for the
9 period from 21:30 hours January 4, 2014 to 20:30 hours January 5, 2014. Hydro
10 should have extended the period to 21:30 hours on January 5, 2014 as 21:27 hours
11 was the time of the Holyrood unit trips due to the B1L17 breaker issue. The
12 estimated replacement costs attributable to Holyrood Unit 1 vibration for this
13 period should have been stated as \$525,897. The total replacement costs for the
14 same period should have been stated as \$1,207,661.¹ For the corrected numbers,
15 refer to the attached PR-PUB-NLH-187 Attachment 1.

16
17 The figures in columns "HRD 1" through to "BDE 6" in PR-PUB-NLH-187 Attachment
18 1 represent the amount of generation availability during each of the intervals. The
19 figures in column "Interval Costs" represent the total additional supply costs during
20 each of the intervals. The assigned Unit 1 vibration related replacement energy
21 costs are estimated using proration (i.e., supply cost multiplied by [Unit 1
22 unavailable/total unavailable]) for each interval.

¹ Note that the \$1,533,991 in Hydro's response to PR-PUB-NLH-129 (Revision 1, June 30-15) should have been stated as \$1,153,991. This was a simple transcription error. Using the longer period yields the \$1,207,661.

HRD 1	HRD 2	HRD 3	HWD	SVL	GCL	Exploits	USL	CAT	STA	HBV	HLK	BDE 5	BDE 6	Total Unavailable	Interval Costs	Unit 1 Vibration Related Costs	Total Period Costs	Unit 1 Vibration Related Costs
04-Jan-14 21:15:00	04-Jan-14 21:30:00	165	165	150	50	25	8	24						587	12756.1	4931.888	1,207,661	525,897
04-Jan-14 21:30:00	04-Jan-14 21:45:00	165	0	150	50	25	8	24						422	12613.68	4881.726		
04-Jan-14 21:45:00	04-Jan-14 22:00:00	165	0	150	50	25	8	24						422	12485.38	5012.41		
04-Jan-14 22:00:00	04-Jan-14 22:15:00	165	0	150	50	25	8	24						422	12819.62	5126.353		
04-Jan-14 22:15:00	04-Jan-14 22:30:00	165	0	150	50	25	8	24						422	13111.04	5043.659		
04-Jan-14 22:30:00	04-Jan-14 22:45:00	165	0	150	50	25	8	24						422	12899.54	4735.473		
04-Jan-14 22:45:00	04-Jan-14 23:00:00	165	0	150	50	25	8	24						422	12111.33	4649.18		
04-Jan-14 23:00:00	04-Jan-14 23:15:00	165	0	150	50	25	8	24						422	11890.63	4621.716		
04-Jan-14 23:15:00	04-Jan-14 23:30:00	165	0	150	50	25	8	24						422	11820.39	4626.273		
04-Jan-14 23:30:00	04-Jan-14 23:45:00	165	0	150	50	25	8	24						422	11832.04	4617.959		
04-Jan-14 23:45:00	05-Jan-14 00:00:00	165	0	150	50	25	8	24						422	11819.88	4621.522		
05-Jan-14 00:00:00	05-Jan-14 00:15:00	165	0	150	50	25	8	24						422	11810.78	4618.078		
05-Jan-14 00:15:00	05-Jan-14 00:30:00	165	0	150	50	25	8	24						422	11819.89	4621.771		
05-Jan-14 00:30:00	05-Jan-14 00:45:00	165	0	150	50	25	8	24						422	11811.08	4621.737		
05-Jan-14 00:45:00	05-Jan-14 01:00:00	165	0	150	50	25	8	24						422	11820.53	4614.819		
05-Jan-14 01:00:00	05-Jan-14 01:15:00	165	0	150	50	25	8	24						422	11820.44	5239.97		
05-Jan-14 01:15:00	05-Jan-14 01:30:00	165	0	150	50	25	8	24						422	11802.75	5506.285		
05-Jan-14 01:30:00	05-Jan-14 01:45:00	165	0	100	50	25	8	24						372	11813.75	5426.564		
05-Jan-14 01:45:00	05-Jan-14 02:00:00	165	0	100	50	25	8	24						372	12414.17	5401.22		
05-Jan-14 02:00:00	05-Jan-14 02:15:00	165	0	100	50	25	8	24						372	12234.44	5406.855		
05-Jan-14 02:15:00	05-Jan-14 02:30:00	165	0	100	50	25	8	24						372	12177.3	5413.544		
05-Jan-14 02:30:00	05-Jan-14 02:45:00	165	0	100	50	25	8	24						372	12190	5406.582		
05-Jan-14 02:45:00	05-Jan-14 03:00:00	165	0	100	50	25	8	24						372	12205.08	5417.55		
05-Jan-14 03:00:00	05-Jan-14 03:15:00	165	0	100	50	25	8	24						372	12189.38	5420.312		
05-Jan-14 03:15:00	05-Jan-14 03:30:00	165	0	100	50	25	8	24						372	12214.11	5417.553		
05-Jan-14 03:30:00	05-Jan-14 03:45:00	165	0	100	50	25	8	24						372	12220.34	5431.127		
05-Jan-14 03:45:00	05-Jan-14 04:00:00	165	0	100	50	25	8	24						372	12214.12	5427.356		
05-Jan-14 04:00:00	05-Jan-14 04:15:00	165	0	100	50	25	8	24						372	12244.72	5417.861		
05-Jan-14 04:15:00	05-Jan-14 04:30:00	165	0	100	50	25	8	24						372	12236.22	5413.695		
05-Jan-14 04:30:00	05-Jan-14 04:45:00	165	0	100	50	25	8	24						372	12214.81	5425.443		
05-Jan-14 04:45:00	05-Jan-14 05:00:00	165	0	100	50	25	8	24						372	12205.42	5420.309		
05-Jan-14 05:00:00	05-Jan-14 05:15:00	165	0	100	50	25	8	24						372	12231.91	5415.933		
05-Jan-14 05:15:00	05-Jan-14 05:30:00	165	0	100	50	25	8	24						372	12220.33	5412.714		
05-Jan-14 05:30:00	05-Jan-14 05:45:00	165	0	100	50	25	8	24						372	12210.47	5414.971		
05-Jan-14 05:45:00	05-Jan-14 06:00:00	165	0	100	50	25	8	24						372	12203.21	5421.397		
05-Jan-14 06:00:00	05-Jan-14 06:15:00	165	0	100	50	25	8	24						372	12208.3	5423.611		
05-Jan-14 06:15:00	05-Jan-14 06:30:00	165	0	100	50	25	8	24						372	12222.79	5418.257		
05-Jan-14 06:30:00	05-Jan-14 06:45:00	165	0	100	50	25	8	24						372	12227.78	5411.016		
05-Jan-14 06:45:00	05-Jan-14 07:00:00	165	0	100	50	25	8	24						372	12215.71	5429.425		
05-Jan-14 07:00:00	05-Jan-14 07:15:00	165	0	100	50	25	8	24						372	12199.38	5480.958		
05-Jan-14 07:15:00	05-Jan-14 07:30:00	165	0	100	50	25	8	24						372	12240.88	5481.769		
05-Jan-14 07:30:00	05-Jan-14 07:45:00	165	0	100	50	25	8	24						372	12357.07	5479.985		
05-Jan-14 07:45:00	05-Jan-14 08:00:00	165	0	100	50	25	8	24						372	12358.9	5529.236		
05-Jan-14 08:00:00	05-Jan-14 08:15:00	165	0	100	50	25	8	26						374	12421.3	5554.189		
05-Jan-14 08:15:00	05-Jan-14 08:30:00	165	0	100	50	25	8	26						374	12532.94	5586.325		
05-Jan-14 08:30:00	05-Jan-14 08:45:00	165	0	100	50	25	8	26						374	12589.5	5579.586		
05-Jan-14 08:45:00	05-Jan-14 09:00:00	165	0	100	50	25	8	26						374	12662.34	5594.62		
05-Jan-14 09:00:00	05-Jan-14 09:15:00	165	0	100	50	25	8	26						374	12647.06	5545.225		
05-Jan-14 09:15:00	05-Jan-14 09:30:00	165	0	100	50	25	8	26						374	12681.14	5535.408		
05-Jan-14 09:30:00	05-Jan-14 09:45:00	165	0	100	50	25	8	26						374	12569.18	5582.427		
05-Jan-14 09:45:00	05-Jan-14 10:00:00	165	0	100	50	25	8	26						374	12546.92	5582.53		
05-Jan-14 10:00:00	05-Jan-14 10:15:00	165	0	100	50	25	8	26						374	12653.5	5520.566		
05-Jan-14 10:15:00	05-Jan-14 10:30:00	165	0	100	50	25	8	26						374	12653.73	5519.557		
05-Jan-14 10:30:00	05-Jan-14 10:45:00	165	0	100	50	25	8	26						374	12513.28	5551.337		
05-Jan-14 10:45:00	05-Jan-14 11:00:00	165	0	100	50	25	8	26						374	12511	5571.234		
05-Jan-14 11:00:00	05-Jan-14 11:15:00	165	0	100	50	25	8	26						374	12583.03			
05-Jan-14 11:15:00	05-Jan-14 11:30:00	165	0	100	50	25	8	26						374	12628.13			

Generation Restoration

Stephenville GT – 15:56

BDE Unit 6 – 16:05

BDE Unit 5 – 16:06

Cat Arm – 16:06

Hawkes Bay diesels – 16:11

Granite Canal – 16:26

Holyrood Unit 2 – 21:34

Holyrood Unit 3 – 01:40 (January 5)

		HRD 1	HRD 2	HRD 3	HWD	SVL	GCL	Exploits	USL	CAT	STA	HBY	HLK	BDE 5	BDE 6	Total Unavailable	Interval Costs	
05-Jan-14 11:30:00	05-Jan-14 11:45:00	165	0	100	50	25	25	0	26							366	12714.09	5731.764
05-Jan-14 11:45:00	05-Jan-14 12:00:00	165	0	100	50	25	25	0	26							366	12690.57	5721.159
05-Jan-14 12:00:00	05-Jan-14 12:15:00	165	0	100	50	25	25	0	26							366	12695.45	5723.359
05-Jan-14 12:15:00	05-Jan-14 12:30:00	165	0	100	50	25	25	0	26							366	12725.58	5736.944
05-Jan-14 12:30:00	05-Jan-14 12:45:00	165	0	100	50	25	25	0	26							366	12655.77	5705.468
05-Jan-14 12:45:00	05-Jan-14 13:00:00	165	0	100	50	25	25	0	26							366	12642.06	5699.291
05-Jan-14 13:00:00	05-Jan-14 13:15:00	165	0	100	50	25	25	0	26							366	12630.86	5694.242
05-Jan-14 13:15:00	05-Jan-14 13:30:00	165	0	100	50	25	25	0	26							366	12609.06	5684.413
05-Jan-14 13:30:00	05-Jan-14 13:45:00	165	0	100	50	25	25	0	26							366	12488.52	5630.071
05-Jan-14 13:45:00	05-Jan-14 14:00:00	165	0	100	50	25	25	0	26							366	12531.73	5649.552
05-Jan-14 14:00:00	05-Jan-14 14:15:00	165	0	100	50	25	25	0	26							366	12683.6	5718.016
05-Jan-14 14:15:00	05-Jan-14 14:30:00	165	0	100	50	25	25	0	26							366	12720.28	5734.551
05-Jan-14 14:30:00	05-Jan-14 14:45:00	165	0	100	50	25	25	0	26							366	12714.65	5732.016
05-Jan-14 14:45:00	05-Jan-14 15:00:00	165	0	100	50	25	25	0	26							366	12686.95	5719.526
05-Jan-14 15:00:00	05-Jan-14 15:15:00	165	0	100	50	25	25	0	26							366	12685.59	5718.911
05-Jan-14 15:15:00	05-Jan-14 15:30:00	165	0	100	50	25	25	0	26							366	12583.43	5672.856
05-Jan-14 15:30:00	05-Jan-14 15:45:00	165	0	100	50	25	25	0	26							366	12501.28	5635.823
05-Jan-14 15:45:00	05-Jan-14 16:00:00	165	0	100	50	25	25	0	26							366	12500.14	5635.311
05-Jan-14 16:00:00	05-Jan-14 16:15:00	165	0	100	50	25	25	0	26							366	12498.55	5634.593
05-Jan-14 16:15:00	05-Jan-14 16:30:00	165	0	100	50	25	25	0	26							366	12500.16	5635.32
05-Jan-14 16:30:00	05-Jan-14 16:45:00	165	0	100	50	25	25	0	26							366	12486.51	5629.165
05-Jan-14 16:45:00	05-Jan-14 17:00:00	165	0	100	50	25	25	0	26							366	12515.11	5642.059
05-Jan-14 17:00:00	05-Jan-14 17:15:00	165	0	100	50	25	25	0	26							366	12530.94	5649.196
05-Jan-14 17:15:00	05-Jan-14 17:30:00	165	0	100	50	25	25	0	26							366	13444.47	6061.031
05-Jan-14 17:30:00	05-Jan-14 17:45:00	165	0	100	50	25	25	0	26							366	13505.96	6088.753
05-Jan-14 17:45:00	05-Jan-14 18:00:00	165	0	100	50	25	25	0	26							366	13495.88	6084.21
05-Jan-14 18:00:00	05-Jan-14 18:15:00	165	0	100	50	25	25	0	26							366	13490.44	6081.754
05-Jan-14 18:15:00	05-Jan-14 18:30:00	165	0	100	50	25	25	0	26							366	13678.99	6166.758
05-Jan-14 18:30:00	05-Jan-14 18:45:00	165	0	100	50	25	25	0	26							366	13690.97	6172.157
05-Jan-14 18:45:00	05-Jan-14 19:00:00	165	0	100	50	25	25	0	26							366	13600.97	6131.585
05-Jan-14 19:00:00	05-Jan-14 19:15:00	165	0	100	50	25	25	0	26							366	13507.79	6089.579
05-Jan-14 19:15:00	05-Jan-14 19:30:00	165	0	100	50	25	25	0	26							366	13517.19	6093.815
05-Jan-14 19:30:00	05-Jan-14 19:45:00	165	0	100	50	25	25	0	26							366	13464.09	6069.876
05-Jan-14 19:45:00	05-Jan-14 20:00:00	165	0	100	50	25	25	0	26							366	13461.12	6068.54
05-Jan-14 20:00:00	05-Jan-14 20:15:00	165	0	100	50	25	25	0	26							366	13490.44	6081.758
05-Jan-14 20:15:00	05-Jan-14 20:30:00	165	0	100	50	25	25	0	26							366	13499.02	6085.624
05-Jan-14 20:30:00	05-Jan-14 20:45:00	165	0	150	50	25	25	0	26				0			416	13502.95	5355.735
05-Jan-14 20:45:00	05-Jan-14 21:00:00	165	0	150	50	25	25	0	26				0			416	13503.06	5355.782
05-Jan-14 21:00:00	05-Jan-14 21:15:00	165	0	150	50	25	25	0	26				0			416	13442.96	5331.944
05-Jan-14 21:15:00	05-Jan-14 21:30:00	165	0	150	50	25	25	0	26				0			416	13220.89	5243.862