

**POWER PURCHASE AGREEMENT**

**SCHEDULE 1**

**BASE BLOCK CAPITAL COSTS RECOVERY**

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**Section 1      Definitions**

In this **Schedule 1**:

**“Assigned IRR”** means **8.4%**;

**“BB”** means **Base Block Energy**;

**“Base Block Capital Costs Recovery”** or **“BBCR”** means the recovery over the Supply Period of the following costs, without duplication:

- (a) Development Capital Costs, which shall provide for the repayment of principal under the Financing and the return of equity capital to the equity holder;
- (b) Development Financing Costs; and
- (c) distributions to equity holders sufficient to enable Muskrat to achieve its Assigned IRR;

**“Base Block Capital Costs Recovery Adjustment”** or **“BBCRA”** has the meaning set forth in **Section 4** of this **Schedule 1**;

**“Base Block Capital Supply Price”** or **“BBCSP”** has the meaning set forth in **Section 5** of this **Schedule 1**;

**“Base Year”** means 2013 and **“by”** shall be construed accordingly;

**“Escalation Factor”** or **“ESC”** means **2%**;

**“IRR”** means the internal rate of return on equity capital earned by Muskrat’s equity investor over the period beginning with Sanction and ending at the end of the Supply Period, the IRR being the percentage discount rate which, if applied to the series of equity cash flows over the period beginning with Sanction and ending at the end of the Supply Period including all equity investments and distributions to equity, results in a discounted value of zero;

**“M”** means the number of months in an Operating Year;

**“m”** means the value attributable to a month within a given Operating Year;

**“y”** means the value attributable to a given Operating Year; and

**“^”** means raised to the power of.

**Section 2 Introduction**

This **Schedule 1** sets out the methodology for calculation of the Base Block Capital Costs Recovery. The result of these calculations is set forth in **Appendix A** to this **Schedule 1** for illustrative purposes. Base Block Capital Costs Recovery calculations are performed from time to time in a manner set forth in **Section 5** of this **Schedule 1**.

Nothing in this **Schedule 1** modifies the provisions in **Article 3** of this Agreement concerning Energy and Capacity management, nor does the actual delivery of Energy from Muskrat to NLH pursuant to **Article 3** of this Agreement affect the Base Block Capital Costs Recovery.

Base Block Capital Costs Recovery is a dollar value applicable to and recovered in each Operating Year.

The calculation and implementation of the Base Block Capital Costs Recovery develops from the Effective Date through the Commissioning Period and the Supply Period as follows:

<b>Period</b>	<b>Base Block Capital Costs Recovery Change?</b>	<b>Money Change Hands?</b>
Effective Date to immediately before Commissioning Period	Yes, prospectively to reflect changes in amount and timing of Development Capital Costs, Development Financing Costs, the prospective terms and conditions for the Financing during the Supply Period, and prospective Commissioning Date	No
Commissioning Period	Yes, prospectively to reflect changes in amount and timing of Development Capital Costs, Development Financing Costs, the prospective terms and conditions for the Financing during the Supply Period, prospective Commissioning Date, and any Commissioning Period Block Payments	Yes if Commissioning Period Block purchased by NLH and if so, Commissioning Period Block Payments pursuant to <b>Section 4.1</b>
Supply Period	No	Yes, Base Block Capital Costs Recovery

Prior to commencement of the Commissioning Period, no payments are made under the Agreement. The Base Block Capital Costs Recovery is calculated from time to time (as set forth in **Section 3** through **Section 5** of this **Schedule 1**) on a prospective basis to reflect changes in the amount and timing of Development Capital Costs and Development Financing Costs, the prospective terms and conditions for the Financing during the Supply Period, and the projected Commissioning Date.

Throughout the Commissioning Period, Commissioning Period Payments will be made in accordance with **Section 4.1**. The Base Block Capital Costs Recovery continues to be recalculated as necessary on a prospective basis reflecting the amount and timing of Development Capital Costs and Development Financing Costs, the prospective terms and conditions for the Financing during the Supply Period, the projected Commissioning Date and the amount and timing of any Commissioning Period Payments (which are applied to reduce Development Capital Costs in accordance with **Section 4.1(c)**).

The Base Block Capital Costs Recovery is recalculated on or about the Commissioning Date. The Base Block Capital Costs Recovery calculation is at such time fixed based on final determination of Development Capital Costs (net of any Commissioning Period Block Payments), Development Financing Cost, the terms and conditions of the Financing during the Supply Period, and the Commissioning Date. Should final Development Costs and Development Financing Costs, including claims, differ from those used in the calculation as at the Commissioning Date, the Base Block Capital Costs Recovery will be revised prospectively for the remainder of the Supply Period. The Base Block Capital Costs Recovery does not change thereafter, subject to **Section 4** of this **Schedule 1**.

### **Section 3 Base Block Capital Costs Recovery Calculation Based On Base Block Energy**

The Base Block Capital Costs Recovery in each Operating Year, in dollars, is calculated prior to the Commissioning Date in the first instance (and subject to subject to **Section 4** of this **Schedule 1**) as:

- The Base Block Energy value in each such Operating Year (in GWh); times
- The Base Block Capital Supply Price applicable to such Operating Year (in dollars per MWh); times
- 1,000; and
- The amount attributable to a given month within the Operating Year is this value divided by the number of months in that Operating Year.

Algebraically (and before consideration of the provisions of **Section 4** of this **Schedule 1**):

$$\text{BBCCR}_y = \text{BB}_y \times \text{BBCSP}_y \times 1,000; \text{ and}$$

$$\text{BBCCR}_m = \text{BBCCR}_y \div \text{M}_y$$

### **Section 4 Base Block Capital Costs Recovery Adjustment**

If, in any month, the Base Block Capital Costs Recovery is projected to be insufficient to enable Muskrat to meet all of its obligations under applicable Financing Documents, the recovery for Base Block Capital Costs Recovery shall be adjusted to enable Muskrat to meet all its obligations in such month. Any such adjustments will be a Base Block Capital Costs Recovery Adjustment and shall always be a positive amount.

For as long as such Base Block Capital Costs Recovery Adjustment remains unreimbursed as described below, the balance of such unreimbursed Base Block Capital Costs Recovery Adjustment will accrue interest at a rate equal to NLH's prevailing regulated cost of capital.

Base Block Capital Costs Recovery Adjustment will be reimbursed to NLH, subject to availability of funds and to the provisions of the Financing Documents. Such reimbursements (including reimbursement of accrued interest) will be considered Base Block Capital Costs Recovery Adjustment and shall always be a negative amount. If, in any period, Muskrat is unable to reimburse NLH fully as described above, the obligation to do so will carry over to subsequent periods.

Therefore, including Base Block Capital Costs Recovery Adjustment:

$$\text{BBCCR}_m = \text{BBCCR}_y \div \text{My} + \text{BBCCRA}_m$$

Recognizing that any LTA Capital Costs Recovery Adjustments payable by Muskrat to Labrador Transco as contemplated by Section 4 of Schedule 1 of the GIA, are payable by NLH to Muskrat as O&M Costs under this Agreement, and that any such LTA Capital Costs Recovery Adjustment shall accumulate interest at a rate equal to NLH's prevailing regulated cost of capital; immediately upon receipt by Muskrat from Labrador Transco, LTA Costs Recovery Adjustments will be reimbursed to NLH, subject to availability of funds and to the provisions of the Financing Documents.

NLH shall not rely on this **Section 4** for the purposes of defraying or reallocating any portion of the O&M Costs payable under this Agreement.

## **Section 5 Derivation of the Base Block Capital Supply Price**

The BBCSP is an escalating supply price in dollars per MWh applied to Base Block Energy for the sole purpose of calculating the Base Block Capital Costs Recovery. The BBCSP is subject to escalation at the Escalation Factor each January 1 with the first such escalation being on January 1 of the first Operating Year after the Base Year.

$$\text{BBCSP}_y = \text{BBCSP}_{by} \times (1 + \text{ESC})^{(y - by)}$$

The BBCSP will be derived using an agreed financial model to be finalized prior to funding under the Financing, and two identical copies of which will be stored on compact discs or other storage medium as agreed by the Parties, each disc or other digital storage medium identified as "Muskrat Base Block Capital Costs Recovery Calculation [INSERT FUNDING DATE], **Schedule 1** to the Power Purchase Agreement between Newfoundland and Labrador Hydro and Muskrat Falls Corporation made effective November 29, 2013" each disc initialled by authorized representatives of Muskrat and NLH.

This financial model derives the BBCSP as at the Base Year (BBCSP<sub>by</sub>) which enables Muskrat to achieve its Assigned IRR. Calculations in the financial model will conform to applicable provisions of the Financing Documents. The BBE, Assigned IRR, Base Year, Escalation Factor and maximum debt:equity ratio of 65:35 are not subject to change after the Effective Date. The inputs to the

financial model that may vary between the Effective Date and the Commissioning Date are as follows:

Tab	Line/cell	Description	Source
Control	F11, F21	Supply price optimization inputs	Muskrat model operator
Control	M73 - M77	Cost overrun apportionment – part of IRR optimization	
AS	F47	COREA IRR mode	
AS	F31	Reporting date	Muskrat model operator
AS	F14, F16, F18, F20, F22, F24	Commissioning date	Muskrat, as verified by the Independent Engineer or actual date
AS	F46	Mark-to-Actual toggle	Muskrat model operator
AS	F50	Interest on DSRA and LRA	Muskrat assumption, based on financial market forward projections
AS	F74, F76, F80, F81, F82, F83, F85, F86	SDN parameters	Muskrat, Financing Documents
ASM	R8 – T705	SDN series	Muskrat, Financing Documents
AS	F98, F119, F140	Interest rate on BSF	Muskrat assumption, based on financial market forward projections
ASM	AB8 – AC705	Capex cash flow series	Muskrat, as verified by the Independent Engineer
ASM	AF8 – AG705	Innu payments	Muskrat
ASM	AH8 – AH705	Revenue before Commissioning	Muskrat
ASM	AJ8 – AJ705	Interest earned on Bond Holding Account/Working Capital Reserve	Muskrat financial reporting

Tab	Line/cell	Description	Source
ASM	AK8 – AS705	Interest earned on deposits – BSF, DSEA, LRA, DSRA, cash balances (actuals)	Muskrat forecast assumption
IrA	Lines 11 and 12	Interest rates to be used on short term deposits during construction phase (calculated)	Muskrat, from financial market forecasts

The formulae and amounts contained in the financial model have been agreed upon by Muskrat and NLH with the exception of the inputs described in the table above which shall be adjusted as necessary from time to time.

**POWER PURCHASE AGREEMENT**

**APPENDIX A**

**TO**

**SCHEDULE 1 - BASE BLOCK CAPITAL COSTS RECOVERY**

**BASE BLOCK CAPITAL COSTS RECOVERY BY OPERATING YEAR**

## Appendix A to Schedule 1

## Base Block Capital Costs Recovery by Operating Year

Version Date: December 11, 2013

Operating Year	Number of months in Operating Year	Base Block Capital Costs Recovery (\$ millions)
1	7	\$ 82.4 million
2	12	\$ 148.5 million
3	12	\$ 147.3 million
4	12	\$ 156.1 million
5	12	\$ 167.8 million
6	12	\$ 179.8 million
7	12	\$ 189.6 million
8	12	\$ 199.8 million
9	12	\$ 210.2 million
10	12	\$ 221.0 million
11	12	\$ 239.5 million
12	12	\$ 258.7 million
13	12	\$ 270.9 million
14	12	\$ 283.4 million
15	12	\$ 296.4 million
16	12	\$ 309.7 million
17	12	\$ 323.5 million

<b>Operating Year</b>	<b>Number of months in Operating Year</b>	<b>Base Block Capital Costs Recovery (\$ millions)</b>
18	12	\$ 337.7 million
19	12	\$ 352.3 million
20	12	\$ 367.4 million
21	12	\$ 382.9 million
22	12	\$ 398.9 million
23	12	\$ 415.4 million
24	12	\$ 434.9 million
25	12	\$ 451.2 million
26	12	\$ 467.0 million
27	12	\$ 483.2 million
28	12	\$ 499.9 million
29	12	\$ 515.4 million
30	12	\$ 525.7 million
31	12	\$ 536.2 million
32	12	\$ 546.9 million
33	12	\$ 557.9 million
34	12	\$ 569.0 million
35	12	\$ 580.4 million
36	12	\$ 625.9 million
37	12	\$ 644.3 million
38	12	\$ 663.3 million

<b>Operating Year</b>	<b>Number of months in Operating Year</b>	<b>Base Block Capital Costs Recovery (\$ millions)</b>
39	12	\$ 682.7 million
40	12	\$ 702.7 million
41	12	\$ 723.1 million
42	12	\$ 744.1 million
43	12	\$ 765.7 million
44	12	\$ 787.8 million
45	12	\$ 810.5 million
46	12	\$ 833.8 million
47	12	\$ 857.8 million
48	12	\$ 882.3 million
49	12	\$ 907.4 million
50	12	\$ 933.3 million
51	5	\$ 398.8 million

**POWER PURCHASE AGREEMENT**

**SCHEDULE 2**

**INITIAL LOAD FORECAST AND BASE BLOCK ENERGY**

**SCHEDULE 2  
INITIAL LOAD FORECAST AND BASE BLOCK ENERGY**

<b>Operating Year</b>	<b>Assumed year for purpose of calculation</b>	<b>NL Native Load Forecast for Supply Period as of the Effective Date (GWh)</b>	<b>Base Block Energy (GWh)</b>
1*	2018	4637	1133
2	2019	8880	2002
3	2020	8931	1948
4	2021	9023	2024
5**	2022	9147	2132
6	2023	9222	2241
7	2024	9314	2317
8	2025	9407	2392
9	2026	9474	2468
10	2027	9565	2544
11***	2028	9640	2703
12	2029	9694	2863
13	2030	9773	2938
14	2031	9858	3014
15	2032	9920	3090
16	2033	9989	3166
17	2034	10058	3242
18	2035	10128	3317
19	2036	10197	3393
20	2037	10267	3469
21	2038	10330	3545
22	2039	10394	3621
23	2040	10458	3696
24****	2041	10522	3793
25	2042	10585	3859
26	2043	10642	3916
27	2044	10699	3972
28	2045	10755	4029
29	2046	10812	4072
30	2047	10869	4072
31	2048	10909	4072
32	2049	10949	4072
33	2050	10989	4072
34	2051	11029	4072
35	2052	11069	4072
36****	2053	11109	4305
37	2054	11149	4345

Operating Year	Assumed year for purpose of calculation	NL Native Load Forecast for Supply Period as of the Effective Date (GWh)	Base Block Energy (GWh)
38	2055	11189	4385
39	2056	11229	4425
40	2057	11269	4465
41	2058	11309	4505
42	2059	11349	4545
43	2060	11389	4585
44	2061	11429	4625
45	2062	11469	4665
46	2063	11509	4705
47	2064	11549	4745
48	2065	11589	4785
49	2066	11629	4825
50	2067	11669	4865
51*	2068	4879	2038

\*First operating year assumed to be 1 Jun 2018 to 31 Dec 2018, last operating year is 1 Jan to 31 May 2068

\*\*CBPP Co-gen assumed to be retired mid 2022 (51.6 GWh)

\*\*\*Fermeuse and St. Lawrence wind farms assumed to be retired mid 2028 (167 GWh)

\*\*\*\*Emera Agreement assumed to end 1 Jul 2053

\*\*\*\*\*Emera Block limits the energy available to Hydro in 2048 to 2052. The deficit has been added to the Base Block in 2041 to 2047.