

- 1 ○ The Base Block Capital Costs Recovery is defined as the recovery over the supply period of
2 the following (as set out in Schedule 1 of the PPA):
- 3 ▪ development capital costs, which shall provide for the repayment of principal under
4 the financing and the return of equity capital to the equity holder;
- 5 ▪ development financing costs; and
- 6 ▪ distributions to equity holders sufficient to enable MFCo to achieve its Assigned
7 Internal Rate of Return (“IRR”), which the PPA Schedule 1 sets at 8.4%.
- 8 ○ The agreement sets out the methodology for the Base Block Capital Costs Recovery
9 calculation in each Operating Year but ultimately the payment (based on an escalating supply
10 price) will provide for the full cost recovery (including capital, operating, maintenance, taxes,
11 GIA payments, debt service costs and a defined return on equity).
- 12 ○ The payments include an adjustment clause to ensure debt service obligations of MF will be
13 met. This adjustment is known as the Base Block Capital Costs Recovery Adjustment.
- 14 ○ The payments are also impacted by the Base Block Capital Supply Price. This Supply Price is
15 determined on an escalating supply price in dollars per Megawatt Hour (“MWh”) applied to
16 the Base Block Energy for the purpose of calculating the Base Block Capital Costs Recovery.
- 17 ○ In summary:
- 18 ▪ a calculation is completed to determine what costs are required to be recovered over
19 the term of the agreement. These costs include all development costs and cost of
20 capital (debt and equity) incurred;
- 21 ▪ a price per MWh is calculated and is designed to recover these costs over the term
22 of the agreement based on the Base Block Energy. The price increases at a rate of
23 2% per year.
- 24 ○ As the payment is based on the estimated monthly Operating and Maintenance costs, there
25 is a clause in the PPA that allows for the true up of the Operating and Maintenance costs.
26 Each quarter during which the payments are being paid, MFCo must provide the total actual

1 Operating and Maintenance costs incurred for the applicable quarter. If these costs exceed
2 the estimated Operating and Maintenance costs collect by MF, NLH is required to pay
3 MFCo the amount by which the actual costs exceed the estimates. If the actual costs were
4 lower than budget, than MFCo can either elect to pay NLH for the difference or use the
5 difference as a credit against the next Base Block Payment.

6 ○ In totality, the mechanisms included in the PPA will adjust the amount paid for changes in
7 costs to be recovered or if there are changes in the Base Block Energy. Ultimately, this
8 ensures the full recovery from Newfoundland and Labrador island ratepayers over the 50
9 year term of the PPA irrespective of changes in costs or energy usage.

10 ● NLH's obligations to pay the Base Block Payments is absolute, unconditional, irrevocable and is not
11 subject to any reductions until the date in which the MFCo financing is paid in full.

12 ● The PPA states that NLH will acquire and own all Green House Gas Credits related to the Energy
13 delivered to NLH from MFCo. NLH has their own rights and discretion to sell any or all such
14 Credits.

15 ● The PPA provides specific remedies if Base Block Payments are not made.

16 ○ In particular, if NLH fails to make the necessary Base Block Payments while MFCo
17 continues to be in compliance with this agreement, MFCo may provide notice to NLH it is
18 invoking their rights under the PPA which requires that within 10 days of providing such
19 notice, if NLH has not paid the outstanding payment, NLH is required to pay a lump sum
20 amount equal to the full repayment of the debt financing (including principal, accrued
21 interest and any premiums) plus any associated costs (including legal, advisory, transaction
22 and administrative costs).

23 ○ Once this payment is made, MFCo will then recalculate the future Base Block Capital Costs
24 Recovery and, with that, the future Base Block Energy Payments will be adjusted.

25 ○ Further, this lump sum payment does not limit or impair MFCo's ability to seek further
26 compensation for losses associated with the failure to pay the Base Block Payments.

- 1 • From MFCo’s perspective, if the services stated under the PPA are not provided to NLH for a 24
2 hour consecutive period or 24 non-consecutive hours within a seven day period, NLH has the ability
3 to provide notice that at the date specified in the notice, assume Operational Control of the MF
4 Plant. If this were to occur, NLH will be entitled to the rights and will assume all responsibilities and
5 obligations of MFCo based on terms of the PPA.
- 6 ○ The return of MF Plant to MFCo may be done on no less than five business days’ notice
7 provided by NLH.
- 8 • The PPA will terminate at the earlier of the following:
- 9 ○ A period of not less than 50 years from the date of commissioning; and
10 ○ By written agreement of the parties (subject to the approval of the lenders).
- 11 • The PPA further explains sales to external markets under section 4.5 of the agreement titled
12 “External Market Energy Sales”. Under this section, MFCo is required to deliver at the end of each
13 Operating Year, a monthly summary of the previous Operating Year, and based on this summary
14 NLH can specify how much of the NLH Deferred Energy was sold on NLH’s behalf by MFCo
15 (which is defined as “NLH External Market Sales”). The PPA requires MFCo to use commercially
16 reasonable efforts to maximize the price received when entering into energy sales outside of the
17 Province of Newfoundland and Labrador.

18 **The Effect of the PPA on NL Ratepayers and Taxpayers**

19 Under the terms and conditions agreed upon under the PPA, the full cost recovery of MF will be ultimately
20 achieved through the Base Block Energy payments and the mechanisms associated with this payment to
21 continually ensure the debt service obligations are met. Upon initial signing of this agreement and based on
22 the initial timelines and cost estimates, this agreement was supposed to provide a mechanism for Nalcor to
23 recover all construction costs as well as future operating and maintenance costs, from Newfoundland and
24 Labrador island ratepayers. Given the significant cost overruns and delays from the initial budget at the time
25 of signing the PPA, this increased the burden on the Newfoundland and Labrador island ratepayers as they
26 are required to purchase energy from NL under the exclusive rights on the island portion of the Province.

1 As the legislation passed by NL limited the PUB's ability to regulate rates once MF achieved in-service, the
2 PUB is not able to set rates or disallow costs incurred. This limitation ensures the full cost recovery will be
3 assumed by the island ratepayers through the PPA mechanisms in place to recover the full costs of MF.
4 Further, from a Newfoundland and Labrador island ratepayer perspective, the PPA was designed to ensure
5 that through the various blocks of energy, there would be sufficient levels of energy available to meet the
6 future needs of Newfoundland and Labrador island ratepayers even after factoring in the energy committed
7 to Emera. Estimations based on future growth and growing requirements over the term of the PPA were
8 made when designing the load requirements, and through the NLH Deferred Energy mechanism, Muskrat
9 was to maintain an amount of Energy that will never be less than zero, to ensure the needs of Newfoundland
10 and Labrador ratepayers are met.

11 The potential for exporting of excess energy to external markets represents an opportunity for Nalcor to earn
12 increased revenues which will directly benefit the Newfoundland and Labrador taxpayer. Until it is
13 determined whether the May 2018 regulations meet FERC compliance, it is unclear whether the full benefit
14 will be realized. We have further investigated this compliance as well as further assessed the impact of FERC
15 on the Province of Newfoundland and Labrador in the next section of our report.

16 **The Effect of the Legislative Monopoly and the PPA on FERC Compliance**

17 As part of the scope of our report, we have been asked to explain the effect of the legislative monopoly and
18 the PPA on FERC compliance. Our discussion on this subject matter keeps the analysis at a level that
19 introduces what FERC is and what the FERC requirements are. Given the complexities and specific detailed
20 requirements, we have not been able to definitively conclude on whether or not FERC compliance is
21 currently met.

22 *FERC requirements*

23 FERC is an independent agency that regulates the transmission and wholesale sale of electricity in interstate
24 commerce. In its landmark Order No. 888 decision (issued April 24, 1996), FERC sought to remedy undue
25 discrimination in access to monopoly owned transmission facilities and mandated that transmission providers
26 have on file pro forma open access transmission tariffs (OATTs) that "*contain minimum terms and conditions of*
27 *non-discriminatory service*" (Order No. 888 at 1, 4-5, and 21). FERC's pro forma OATT includes a principle of

1 reciprocity that requires a non-jurisdictional utility seeking to receive service under a jurisdictional FERC
2 OATT to offer “comparable” open access transmission service on its own system to those entities it seeks to
3 obtain transmission service from in the United States.
4 FERC also regulates wholesale sales of electricity in interstate commerce and requires all sales of electric
5 energy to be at just and reasonable rates (16 U.S.C. § 824d (a)). In competitive markets, FERC authorizes
6 entities to make wholesales of electricity at market-based rates. Applicants seeking market-based rate approval
7 must demonstrate they lack or have properly mitigated market power in the generation and transmission of
8 electric energy and cannot erect barriers to entry by potential competitors (*Louisiana Energy & Power Auth. v.*
9 *FERC*, 141 F.3d 364, 365 (D.C. Cir. 1998)). To demonstrate the lack of transmission market power, FERC
10 requires applicants to show that any transmission-owning affiliate has an OATT on file with FERC (*TransAlta*
11 *Enters. Corp.*, 75 FERC ¶ 61,268, at 61,875 (1996)). FERC does not require foreign utilities to implement pro
12 forma OATTs, but does require a demonstration that the applicant’s “transmission-owning utility affiliate
13 offers non-discriminatory access to its transmission system that can be used by competitors of the power
14 marketer to reach United States markets” (*Id.* at 61,030-31). This is generally a fact-specific analysis.

15 *Current operations*

16 Based on publically available information from FERC applications, both Nalcor and Emera maintain market-
17 based rate authorization through subsidiary entities. In 2009, Nalcor applied for and was approved for
18 market-based rate authorization from FERC. In 2014, an application to cancel this was filed and
19 subsequently, Nalcor Energy Marketing (another Nalcor subsidiary) filed for market-based rate authorization
20 and was approved. Under the applications filed, both in 2009 and in 2014, Nalcor and its subsidiaries
21 explained that they could not exercise market power with respect to the generation or transmission of electric
22 energy in the United States and, similarly, could not restrict the transmission of electric energy into the United
23 States because they did not own any transmission facilities directly interconnected to the United States. As a
24 result, FERC found that Nalcor and its subsidiaries satisfied the requirements.
25 Nalcor Energy Marketing currently purchases available recapture energy from NLH (under a separate power
26 purchase agreement signed between Nalcor Energy Marketing and NLH) for resale in export markets
27 including the United States. This power purchase agreement also allows Nalcor Energy Marketing the use of

1 NLH's transmission service rights to deliver electricity. These rights include rights provided to NLH through
2 a Transmission Service Agreement with Hydro-Quebec.

3 As noted above, at the time the previous applications were approved, the island portion of Newfoundland
4 and Labrador was not connected to the North American transmission grid (as construction of the Projects
5 was still on-going) and the exclusive access rights legislated to NLH were solely for the island portion of
6 Newfoundland and Labrador. As a result, Nalcor was able to demonstrate that it could not restrict
7 transmission of electric energy into the United States because NLH's transmission facilities were not directly
8 interconnected to the United States. However, now that the island portion of Newfoundland and Labrador
9 will be connected to the North American system through the sanctioning of the Projects, a determination
10 must be made as to whether Nalcor will be in compliance with FERC's open access requirements once the
11 Projects were commissioned. This will be important as it is Nalcor's intention to export excess energy from
12 MF into external markets, with the Northeastern United States market being one of the key export markets.

13 *Impact to Projects upon facilitating the FLG and sanctioning the Projects*

14 Based on the initial executed agreements and the initial amendments to legislation to facilitate the FLG and
15 sanction the Projects, NLH was provided exclusive access to supply, transmit, distribute and sell electrical
16 power or energy on the island portion of the Province of Newfoundland and Labrador under section 14.1 of
17 the EPCA. By NL legislating NLH's exclusive access on the island portion of the Province, this inherently
18 restricted Newfoundland and Labrador's island ratepayers from accessing power from other suppliers from
19 2012 onwards, and similarly appeared to restrict the ability of third parties to secure open, non-discriminatory
20 transmission service over the Projects into the United States. The exclusive access provided to NLH appeared
21 to put the island portion of Newfoundland and Labrador offside with the requirement to offer "comparable"
22 open access transmission services in the Province of Newfoundland and Labrador to third-party suppliers.
23 This, in turn, could jeopardize the ability of Nalcor or its affiliates to maintain market-based rate approval and
24 participate in the US wholesale energy markets.

25 *Impact of 2018 legislation on open access*

26 As a result of the restrictions to open access on the island portion of the Province of Newfoundland and
27 Labrador, in May 2018 NL passed OC2018-088, which amended the regulations under the EPCA and the

1 Public Utilities Act. The purpose of OC2018-088 was to bring the Province of Newfoundland and Labrador
2 into compliance with FERC's requirements by providing open access transmission services across the
3 Province of Newfoundland and Labrador as a whole. The regulations passed under this OC were titled the
4 "Open Access Transmission Regulations". Under these regulations, the Newfoundland and Labrador System
5 Operator was established as a separate division of NLH. Although a division of NLH, the Newfoundland and
6 Labrador System Operator is to act independent of NLH in its activities and responsibilities managing the use
7 of Newfoundland and Labrador's transmission functions. Transmission functions under the regulations are
8 defined as "the planning, directing, organizing or carrying out of day to day operations relating to the
9 transmission service on the integrated electric system, including the granting and denying of transmission
10 service requests".

11 These new regulations outline the system operator's and transmission owners' duties and functions, outline
12 what is to be included in the transmission tariff, and outline the transmission information that the system
13 operator is to make accessible to transmission customers. In totality, these regulations set out a framework
14 that creates a systems operator, separates the transmission functions and outlines the transmission tariffs
15 which appear to address the restrictions on the open access transmission services. Although these regulations
16 have been legislated, it is unclear based on the available information how the framework has been or will be
17 implemented from an operations perspective in the Province of Newfoundland and Labrador. Because
18 FERC's analysis is fact-specific, the implementation of the framework and ensuring compliance with the
19 legislation will ultimately determine whether or not NLH will be deemed to be in compliance with FERC's
20 open access requirements under Order No. 888. Assuming that NLH implements the framework in a
21 manner similar to other Canadian transmission-owning utilities with OATTs and related open access
22 requirements that have been found by FERC to be in compliance with Order No. 888, FERC will likely make
23 a similar determination with respect to NLH.

Appendix A – Debt Service Coverage Ratio

As specifically stated in the FLG terms and conditions, the debt of each Borrower is subject to a Debt Service Coverage Ratio (“DSCR”) calculated as:

- DSCR = Base Cash Flow/Debt Service, where:
 - Base Cash Flow = Liquidity Reserve plus Contracted Revenues less Cash Operating Costs
 - Debt Service = Amortization plus Interest Expense
 - Amortization = The amortization amount corresponding to the FLG Amortization profile in respect of each Borrower
 - Interest Expense = The interest expense for the period
 - Contracted Revenues:
 - MF
 - (a) for the purposes of Initial Debt Servicing, DSCR shall include only the Base Block Revenue plus Liquidity Reserve; and
 - (b) for all other purposes, DSCR shall include the Base Block Revenue plus Liquidity Reserve, plus revenue from power purchase agreements with investment grade parties, based on the total annual energy sales not to exceed (P50) energy production for MF.
 - LTA: for all purposes, DSCR shall include LTA Tariff Revenue plus Liquidity Reserve.
 - LIL: for all purposes, DSCR shall include revenue from NLH under the LIL Assets Agreement plus any Liquidity Reserve.
 - ML: for all purposes, DSCR shall include revenues collected from ratepayers under the cost-recovery framework imposed by the UARB plus Liquidity Reserve.
 - Cash Operating Costs includes all cash costs of the Borrower, excluding interest and principal on any Guaranteed Debt.

Appendix B – Additional Pre-conditions

As noted with section 3.5 of the FLG, the following conditions had to be completed by the applicable Borrower in a manner that met Canada's satisfaction prior to the execution and delivery of the FLG.

- Execution of the FLG Agreements and all other relevant documents necessary to effect Financial Close;
- Provision by the Credit Rating Agencies of indicative credit ratings for ML equal to or higher than investment grade in the event that the UARB decision differs from the application submitted by MLCo;
- Satisfaction of any and all Project-related due diligence deemed necessary by Canada, including satisfactory review of all required revenue-producing agreements and other agreements including MF PPA, TFA, LIL Assets Agreement;
- Approval by Canada of the Financing, Financing Structure, Financing Documents, and Transaction Structure;
- Report provided by an Independent Engineer that the Projects have sufficient insurance coverage in place that is customary in Projects of this nature and size;
- An interest rate hedging program in place to hedge expected interest expense with respect to the Guaranteed Debt (as required by the nature of the Financing);
- Necessary permits, approvals, land-use agreements and other authorizations required at Financial Close;
- Execution and delivery of the Borrowers indemnifying and saving Canada harmless from and against any liability that Canada incurs solely by virtue of being found, in respect of the Projects, liable as a Partner or Joint Partner;
- Review of technical aspects of the Projects;
- Other Conditions Precedent customarily included in commercial project financing transactions.

Appendix C – Glossary of Abbreviated Terms

<u>Abbreviations</u>	<u>Full Term</u>
Canada	Government of Canada/Her Majesty the Queen in the Right of Canada
COD	Commercial Operations Date
Commission	The Commission of Inquiry Respecting the Muskrat Falls Project
COREA	Cost Overrun Escrow Account
DSCR	Debt Service Coverage Ratio
ECA	Energy Corporation Act
Emera	Emera Inc.
EPCA	Electrical Power Control Act
FERC	United States of America Federal Energy Regulatory Commission
FLG-1, FLG-2, (collectively “FLG”)	Federal Loan Guarantees
GIA	Generator Interconnection Agreement
GWh	Gigawatt Hours
IRR	Internal Rate of Return
LIL	Labrador-Island Link
LILCo	Labrador-Island Link Limited Partnership
LIL OpCo	Labrador-Island Link Operating Corporation
LTA	Labrador Transmission Assets
LTACo	Labrador Transmission Corporation
MF	Muskrat Falls Generation Facility
MFCo	Muskrat Falls Corporation
MF/LTA	Muskrat Falls Generation Facility and Labrador Transmission Assets
ML	Maritime Link
MLCo	Nova Scotia Power Maritime Link Inc.
MWh	Megawatt Hours
Nalcor	Nalcor Energy
NL	Government of Newfoundland and Labrador
NLH	Newfoundland and Labrador Hydro
NS	Government of Nova Scotia
OATT	Open Access Transmission Tariffs
OC	Order in Council
PPA	Power Purchase Agreement
PUB	The Board of Commissioners of Public Utilities – Newfoundland and Labrador
UARB	Nova Scotia Utility and Review Board