

NSPML 2027 / 2028 Assessment Application
(NSEB M12914)
NSPML Responses to Nova Scotia Energy Board Information Requests

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Request IR-01:

Please set out in table format, the proposed invoice amounts to NS Power throughout 2027-2028, including separate columns for 1) the monthly assessments for the 2027 and 2028 cost assessment; 2) the semi-annual assessments for the FLG2; and 3) a total column.

Response IR-01:

Please see proposed payment schedules for 2027 and 2028 below:

Proposed Payment Schedule 2027			
2027			
Month	Assessment	2027 FLG2	Total
Jan-27	13,458,333.33		13,458,333.33
Feb-27	13,458,333.33		13,458,333.33
Mar-27	13,458,333.33		13,458,333.33
Apr-27	13,458,333.33		13,458,333.33
May-27	13,458,333.33	20,678,505.00	34,136,838.33
Jun-27	13,458,333.33		13,458,333.33
Jul-27	13,458,333.33		13,458,333.33
Aug-27	13,458,333.33		13,458,333.33
Sep-27	13,458,333.33		13,458,333.33
Oct-27	13,458,333.33		13,458,333.33
Nov-27	13,458,333.33	18,172,561.00	31,630,894.33
Dec-27	13,458,333.33		13,458,333.33
Total	161,500,000.00	38,851,066.00	200,351,066.00

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Proposed Payment Schedule 2028			
2028			
Month	Assessment	2028 FLG2	Total
Jan-28	12,791,666.67		12,791,666.67
Feb-28	12,791,666.67		12,791,666.67
Mar-28	12,791,666.67		12,791,666.67
Apr-28	12,791,666.67		12,791,666.67
May-28	12,791,666.67	20,227,106.00	33,018,772.67
Jun-28	12,791,666.67		12,791,666.67
Jul-28	12,791,666.67		12,791,666.67
Aug-28	12,791,666.67		12,791,666.67
Sep-28	12,791,666.67		12,791,666.67
Oct-28	12,791,666.67		12,791,666.67
Nov-28	12,791,666.67	17,810,584.00	30,602,250.67
Dec-28	12,791,666.67		12,791,666.67
Total	153,500,000.00	38,037,690.00	191,537,690.00

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Request IR-02:

Reference: Table 2: O&M Forecast, pg.7

Please update Table 2 to add two columns showing a comparison to 2025 actual costs incurred and 2026 forecast costs.

Response IR-02:

Please see updated Table 2 below:

Table 2

<i>O&M Costs (\$m)</i>	<i>2025 Actuals</i>	<i>2026 (approved)</i>	<i>2026 (forecasted)</i>	<i>2027</i>	<i>2028</i>
Maintenance and Inspections	5.2	7.7	8.0	12.8	7.1
Labour and Administration	9.1	9.5	9.5	9.8	10.0
Insurance	4.0	4.5	4.5	4.3	4.2
Independent Engineer	0.2	0.3	0.3	0.3	0.3
Environmental Assessment	0.1				
<i>Total Costs</i>	<i>18.6</i>	<i>22.0</i>	<i>22.3</i>	<i>27.2</i>	<i>21.6</i>

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Request IR-03:

Reference: Table 2: O&M Forecast, pg.7

Please provide, on a confidential basis, a table showing the breakdown of forecast maintenance and inspection costs for 2027 and 2028 as well as approved 2026 costs and incurred 2025 costs (broken down into converters and substation operations, marine surveillance, and service agreements).

Response IR-03:

Maintenance & Inspections:	2025 Actuals	2026 Approved	2027 Assessment	2028 Assessment
Converters & Substations				
Overhead Transmission				
Marine				
Total	5.2	7.7	12.8	7.1

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Request IR-04:

Reference: Section 2.2.4 Labour & Administrative

- a) Please confirm, or clarify otherwise, that only 50% of forecast incentive payments are included in the assessment amount.
- b) Please provide a table showing the breakdown of labour and administrative costs into the following categories for 2027 and 2028 assessment amounts, 2026 approved assessment amounts and the 2025 actual costs incurred: regular and overtime labour, incentive payments, legal and regulatory, consultants, and other.
- c) Please provide a variance calculation showing the variance from 2026 to 2027, and one showing the variance from 2027 to 2028 assessment amounts for the categories of expense in part b).
 - i. For any category that has increased more than 5% from the previous assessment amount, please provide an explanation.
 - ii. What is the basis for using a 3% per year inflationary adjustment?
 - iii. Why did NSPML not apply a 2% per year inflationary adjustment, reflecting the mid-point of the Bank of Canada's inflation target?
- d) Is the number of FTEs projected to remain the same in 2027 and 2028 as 2026?
 - i. If not, please identify how many new positions are being forecasted or eliminated and provide a position description and reasoning for any new or eliminated positions.
- e) How many positions are currently vacant?
- f) Has NSPML included a vacancy allowance in its forecast of labour costs?
 - i. If not, why not?
 - ii. If so, what level of vacancy was projected?

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Response IR-04:

a) 50 percent of non-executive employee incentive is included in the assessment. Executive incentive is not included in the assessment.

b) Please see table below:

Description	2028 Assessment	2027 Assessment	2026 Approved	2025 Actual
Labour & Incentive	4.7	4.6	4.5	3.6
Legal, regulatory, and compliance	2.3	2.2	2.1	3.0
Consultants	0.2	0.2	0.2	0.2
Office, travel, and other	2.8	2.8	2.7	2.3
Total Costs	10.0	9.8	9.5	9.1

c) Please see table below with variance, both the dollar amount and as a percentage.

Variance				
	2026 to 2027 (\$m)	2026 to 2027 (%)	2027 to 2028 (\$m)	2027 to 2028 (%)
Labour & Incentive	0.1	2.2%	0.1	2.2%
Legal, regulatory, & compliance	0.1	4.8%	0.1	4.5%
Consultants	-	0.0%	0.0	0.0%
Office, travel, and other	0.1	3.7%	0.0	0.0%

i) There are no increases greater than 5 percent.

ii) NSPML receives input from human resources when considering the expected increase for labour and related categories. A number of factors are considered to derive the

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1 expected average increase of 3%; including (but not limited to); compensation
2 frameworks, historical data, current and expected market trends as well as inflationary
3 measures. At the time of the application, CPI was also trending close to 3% and
4 therefore was deemed a reasonable inflationary factor.

5 iii) NSPML chose 3% as the inflationary factor for the reasons listed above in (ii).
6

7 d) Yes, the number of FTE's are forecasted to remain consistent in 2027 and 2028 to 2026.
8

9 e) There are currently two vacant positions; consultants are currently being utilized until these
10 roles are filled.
11

12 f) NSPML did not include any vacancy allowance in the 2027/2028 Assessment as NSPML
13 plans to fill all vacant positions or use the budget for consultants as required.

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Request IR-05:

Reference: Section 2.3.2 Sustaining Capital

NSPML expects to incur capital expenditures in 2027 of \$0.5 million and \$1.5 m in 2028 for routine capital expenditures.

- a) Please provide NSPML's definition of a routine capital expenditure**
- b) Please list the expenditure categories falling under General, if/where specific expenditures have been identified.**
- c) How does NSPML forecast its routine expenditures?**

Response IR-05:

- a) This is described in section 5.4 of the Application:

NSPML's routine capital program is for recurring annual expenditures of like-for-like replacement of small pieces of equipment, upgrades or restoration to property and other small additions as required. The type of equipment typically expected to be addressed under this general routine initiative include requirements for general plant and transmission assets such as vehicles, telecommunication upgrades and replacements, and property improvements. The annual amount is nominally \$0.5 million, with the exact figure to be determined from year to year to meet operational needs.

- b) Typical categories include:

- Network equipment at end of life
- Office equipment
- Vehicles
- Off road equipment
- Tools and equipment
- Transmission line components
- Operations technology

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- 1 • Communications hardware
- 2 • Spares-related
- 3
- 4 c) The Routine-General sustaining capital budget is set as of the preparation of the
- 5 Assessment Application. As the budget year approaches and over the course of the year,
- 6 the Routines budget is reviewed and adjusted quarterly as a function of identified initiatives
- 7 and associated cost estimates which evolve over the period with materials and contractor
- 8 pricing and timelines to implementation.

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Request IR-06:

Reference: Section 5.5 Routine – IGBTs

NSPML states:

This initiative continues NSPML’s ongoing process to reach a target IGBTs module spare inventory of 224 units while maintaining adequate redundancy within the operating valves. An order was made in 2024 which was delivered in Q2 2026. NSPML has not yet placed an additional order but now expects to do so in 2027 in which case delivery would be in 2028, assuming similar timelines to the current order.

- a) Since NSPML hasn’t reached the target inventory level, why is it waiting until 2027 to place an order?**
- b) What is the current IGBT inventory level?**
- c) When does NSPML anticipate reaching the target 224 units?**
- d) What was the IGBT unit cost when the order was placed in 2024?**
- e) What is the current IGBT unit cost?**
- f) Please provide a table showing the number and percent of IGBT failures experienced each previous year, including year-to-date 2026.**

Response IR-06:

- a) NSPML decided to await delivery of the 2024 order before preparing for the next order. The 2024 order for 50 units was [REDACTED]. The next order is anticipated to be placed later this year or early 2027 as a function of work prioritization between NSPML and the OEM. Per NSPML’s most recent engagement regarding an upcoming IGBT order with the OEM, a standard shipment may be anticipated nominally [REDACTED] after order, i.e. an order made [REDACTED]. For additional context, please refer to the response to part (c) below.**

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REDACTED

1 b) Please refer to Partially Confidential Attachment 1.

2
3 c) With respect to the timing of achieving the target inventory amounts, NSPML is pursuing
4 a strategy consistent with the approach used since entering operations which balances
5 economics with market and operating risk considerations.

6
7 The target IGBT inventory level of 224 is based on mitigating the risk that a valve arm
8 fails and all 224 IGBTs in that valve arm need to be replaced at once. If NSPML did not
9 have an inventory of 224, then one pole of the Maritime Link could be out of service until
10 the replacement IGBTs could be manufactured and shipped, which, as noted in the response
11 to (a) above, could be an extended period. This was explained in NSPML's Reply
12 submission in the 2024 Assessment proceeding as follows:

13
14 As an example of a failure event, consider an incident that involves a valve
15 arm of an IGBT, which contains 224 IGBTs. NSPML's target inventory for
16 IGBTs is 224 to ensure coverage for such an in-service failure, and given
17 that the actual failure rate could potentially be higher than ■■■% in a year
18 (while acknowledging that the failure rate to date has been below ■■■%),
19 and that IGBT units are increasing in age along with an increased utilization
20 of the Maritime Link, failure rates may increase.¹

21
22 The target inventory is not based on the actual failure rate of IGBTs, but the failure rate
23 does impact the purchase assumptions. While NSPML may anticipate that the failure rate
24 will continue as it has, it also needs to be prepared for it being higher. For long term
25 planning purposes, NSPML currently assumes the IGBT failure rate is ■■■%. History of
26 failures does not predict future failures as there are a host of factors that influence IGBT
27 failure rates including the operating regime.

¹ NSPML 2024 Assessment Application, M11285, Final Reply, December 5, 2023, page 9,

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REDACTED

1 To build the IGBT inventory the approach is to forecast based on a [REDACTED] % failure rate and
2 to the extent the failure rate is lower, NSPML intends to purchase spares. In Confidential
3 Attachment 1, NSPML has made an illustrative projection of this approach; it uses a [REDACTED] %
4 failure rate ([REDACTED] units/year), assumes the historical average failure rate continues (6
5 units/year), with inventoried spares equalling the difference between the two. This
6 projection also assumes each order is 50 units with delivery periods of [REDACTED].

7
8 With this inventory strategy and these assumptions, NSPML reaches a minimum of 224
9 units in stock by 2032. The strategy is subject to change over time if risk factors or
10 economics evolve.

11
12 d) The total cost for the December 2024 order was \$ [REDACTED] per unit for 50 units.

13
14 e) The quoted cost for 50 units (as of December 2025) is estimated to be \$ [REDACTED] per unit.
15 Final pricing is subject to negotiation.

16
17 f) Please refer to Partially Confidential Attachment 1.

Year	Opening Inventory	Current Long Term IGBT Failure Rate for Planning Purposes	IGBTs Failed and Replaced	Difference of Long Term Failure Rate and historical average @ 2026	Orders Made	Orders Received	Closing Inventory	Actual Failure Rate (%)	Comments
2018			6				74	0.11%	Warranty Period Jan 18-Jan 24
2019			8				74	0.15%	
2020			8				74	0.15%	
2021			3				74	0.06%	
2022			8				74	0.15%	
2023			6		19		74	0.11%	Initial Availability Guarantee Settlement
2024			5		50			0.09%	1st order in operations period
2025			1			19		0.02%	
2026*			6		50	50		0.11%	
2027*			6					0.11%	
2028*			6		50	50		0.11%	
2029*			6					0.11%	
2030*			6		50	50		0.11%	
2031*			6					0.11%	
2032*			6			50		0.11%	

*Illustrative Projection 2026-2032

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Request IR-07:

Reference: Section 2.5 2027 and 2028 Equity Financing Costs

Please confirm, or clarify otherwise, an in-service date of the end of Q3 2028 was used for the SCM upgrade costs in the calculation of average rate base.

Response IR-07:

Confirmed. The SCM upgrade is forecasted to occur during NSPML's 2028 annual maintenance outage that is currently scheduled near the end of September.

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CONFIDENTIAL – ATTACHMENTS ONLY

Request IR-08:

Please provide Attachment 2 for NSPML's 2027 and 2028 Rate Base Continuity Schedule in excel with cells intact and protections removed.

Response IR-08:

Please refer to Confidential Attachment 1 filed electronically.

**NSEB IR-08 Attachment 1
has been filed as a confidential
electronic file.**

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Request IR-09:

Reference: Section 2.4.1 Annual Net Interest Costs

NSPML states:

As previously conveyed, the original FLG relating to the Maritime Link (along with FLG2) presently limit additional borrowings by the Company to \$10 million. As such, utilization of the credit facility will be limited to that amount while the Company works to appropriately expand its borrowing capabilities to better manage its mid- to long-term sustaining capital requirements.

a) If NSPML is unable to alter the \$10 million condition in the FLG agreements, how does it plan to finance its sustaining capital?

b) Were sustaining capital requirements above \$10 million not expected when NSPML entered into the FLG agreements?

Response IR-09:

a-b) The \$10,000,000 limit as set out in FLG and FLG2 specifically relates to the Company maintaining an operating line of credit. There is a specific carve out from that limit for additional debt necessary to sustain the Project in proper operating condition during the Operating period. As the Company was able to secure \$35 million in debt facilities, it has sought an increase to the operating line of credit limit from Canada at that same amount in order to ensure flexibility in terms of use of the facility. NSPML acknowledges that this could have been explained more clearly.

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Request IR-10:

Reference: Section 4.0 Marine Survey Cost Recovery

NSPML states two key considerations in the decision about how to finance the marine survey are the following:

- Based on NSPML's understanding of the traditional application of WACC, smoothing is likely to create adverse WACC impacts for customers. Prepayment requires customers to effectively fund such prepaid amounts through NS Power's FAM, thereby paying NS Power's higher WACC to effectively borrow from the FAM while receiving NSPML's lower WACC for the prepaid amount, resulting in a net cost increase to customers
 - At the end stage of financing over a multi-year period, deferring recovery requires NSPML to borrow funds, likely at higher rates than NS Power and, as such, increasing costs ultimately recovered from customers.
- a) These points appear to be somewhat contradictory. If point one is correct, doesn't that imply that customers would have beneficial WACC impacts if NSPML were to pay for the Marine Survey costs and customers repay the amount over later years? Because customers would be saving the higher NS Power WACC on the amount when paid for by NSPML, and paying the lower NSPML WACC on the balance until paid out. Point one appears to assume the amount is funded at WACC and point two appears to assume the amount is funded at the entity's short term borrowing cost. Unless the NS Power FAM balance is reduced to nil, it would appear customers are better off repaying the amount after the fact. Please confirm or clarify otherwise.
- b) Using the interest rate information included in the application, it would appear to Board staff that NSPML's WACC will continue to be lower than NS Power's. Please provide NSPML's forecasted WACC for 2027 and 2028 on a confidential basis.

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1 Response IR-10:

- 2
- 3 a) NSPML does not believe the proposition posed in the question is correct with this being
- 4 primarily due to (i) WACC being calculated and applied to all capital as a blended rate that
- 5 changes from time to time as debt is added and subtracted and (ii) NSPML future
- 6 borrowing costs being forecasted to be higher than NS Power's (please refer to the
- 7 responses to IG IR-9 and SBA IR-5). The fact that NSPML's blended borrowing costs (and
- 8 WACC) will remain lower than NS Power's (due to the impact of the FLG), does not mean
- 9 that NSPML raising new, higher priced debt is better for customers than funding and
- 10 financing through NS Power's FAM account with lower cost new debt.

11

12 It is clear from advocate IR questions that further elaboration on this matter would be

13 beneficial. To start and in addition to the two items listed above (WACC being a blended

14 rate and NSPML's future cost of debt), there are a number of critical assumptions in

15 determining the financial impact on customers:

- 16
- 17 • Any prepayment to NSPML would be made from NS Power's FAM account, as the
- 18 prepayment would be included in NSPML's assessment and included in the
- 19 monthly payments from NS Power to NSPML.
- 20
- 21 • Any deferral of cost recovery after the survey has occurred would require additional
- 22 borrowing by either NSPML or NS Power, until the final amount is recovered from
- 23 customers.

24

25 If customers prepay for the Marine Survey through rates before the survey occurs, that

26 money has an opportunity cost to customers as such prepayment will (i) debit NS Power's

27 FAM account with customers borrowing at NS Power's WACC of ~6.5% and (ii) credit

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1 NSPML with customers earning at NSPML's WACC of ~5.1%. Obviously, this would
2 have a negative financial impact to customers.

3
4 To be responsive to the question, one needs to also understand the impact of deferring cost
5 recovery. As mentioned above, the key to understanding the impact of deferred cost
6 recovery (post Marine Survey completion) is the actual cost of the new debt required to
7 support such deferral - it is not the resulting blended WACC or blended debt rate, as that
8 rate is adjusted based on the cost of the new borrowing and applied to all capital.

9
10 Any deferral of cost of recovery after the Marine Survey occurs would require additional
11 borrowing by NSPML or NS Power, depending on where the funds are sourced. The fact
12 that NSPML's average debt rate (included in WACC) will be lower than NS Power's for
13 an extended period of time (due to the impact of the Federal Loan Guarantee and,
14 essentially, notwithstanding the cost of new debt) is not relevant to whether customers are
15 better off with a new expenditure being funded through new debt raised by NSPML or by
16 NS Power. The factor to consider is the incremental impact of funding through one or the
17 other entity.

18
19 For example, if NSPML's borrowing costs are \$200,000 higher than NS Power's cost, the
20 increased borrowing cost would be blended into NSPML's overall debt costs which,
21 despite including a higher new borrowing cost, would still see NSPML's blended debt rate
22 being lower than NS Power's blended rate. However, despite its average debt cost still
23 being less than NS Power, customers would be worse off by incurring \$200,000 of
24 additional costs. The following chart provides a hypothetical example:

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	Existing debt	New Debt	Blended Annual Rate	Cust Cost of New Debt
NSPML	\$1 billion @ 3.1%	\$10 million @ 6%	3.129% ¹	\$600,000
NS Power	\$4 billion @ 5.0%	\$10 million @ 4%	4.998%	\$400,000

From the hypothetical example, the blended debt rate at NSPML remains lower than NS Power's after incorporation of the new debt but the overall cost to customers of the new debt is higher when NSPML borrows the funds.

This trend holds for all types of borrowing mechanisms, with the extent of variance depending on the type of lending product. For instance, the interest rate spread between NS Power and NSPML would likely be smaller for a short term, variable rate loan than a longer term, fixed rate loan, where the spread could be wider or, possibly, the product may not be made available to NSPML at all.

- b) NSPML's forecasted WACC for 2027 and 2028 is 5.08%. Actual interest costs will change with the market during this period, as NSPML's new debt has a variable rate.

¹ \$1,000,000,000 @ 3.1% = \$31,000,000 interest plus \$10,000,000 @ 6% = \$600,000 interest results in an average debt cost of \$1,041,600,000 / \$1,010,000,000 equaling 3.129 percent average.

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Request IR-11:

On page 8 of 28, NSPML explained its Integrated Vegetation Management methodology and stated that it “is now in a position to provide a vegetation management estimate for the 2027/2028 Assessment Application”.

- a) Please detail the vegetation management activities that are planned to be undertaken in each of 2027 and 2028.**
- b) What are the vegetation management cost estimates included in the 2027/2028 assessment application?**
- c) Has NSPML evaluated whether any cost savings can be achieved by combining its vegetation management contractual requirements with those being undertaken by NS Power? Please elaborate.**
- d) Please provide a copy of NSPML’s vegetation management plan that extends beyond the 2027/2028 period. If none exists, please explain if and when such a plan will be developed.**

Response IR-11:

a-b) The cost estimates included in the application are as follows.

<i>millions</i>	2027	2028
Vegetation Management		

Please also see detail provided in CA IR-003(a). The associated activities are as follows:

- Vegetation Management Program related costs will continue from year to year and relate to ongoing GIS work as well as periodic LiDAR surveys and processing related to the vegetation management assessment for overhead lines in both provinces. A

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LiDAR survey is planned to occur in 2028. In addition to the costs shown, NSPML has hired a forestry consultant to support the program on a part-time basis.

- In Newfoundland, the integrated vegetation management program, which commenced execution in 2026, will continue, targeting areas that were not treated in 2026 program. For 2027 and 2028, NSPML plans to implement the treatment of vegetation on portions of the HVDC and HVAC transmission line right of way, mow and/or mulch of access trails and identified helicopter landing pads, as well as carry out weed control activities in the stations/sites.
- In Nova Scotia, cutting activities along NSPML's grounding line between Woodbine and Big Lorraine, which are currently underway in 2026, are scheduled to be completed in 2027, resulting in a reduction in scope for 2028. In addition, a portion of the HVDC transmission line ROW vegetation will be maintained/treated, an activity that continues year over year and in accordance with NSP's annual schedule.

c) Nova Scotia Power's delivery of NSPML's vegetation management program in Cape Breton is deemed to be the most efficient approach to managing this work scope for NSPML and as a result, NS Power plan and execute the program on behalf of NSPML.

d) Please see Attachment 1 for NSPML's Vegetation Management Plan.

As previously noted, short term activities in Newfoundland are underway for the period 2026-2028. Following this period, the level of vegetation management activity is expected to reduce for a number of years before ramping up again. The timing and magnitude of the vegetation management activities will be determined in time with various inputs including field observations.

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1 In Nova Scotia, the outlook is for a relatively small portion of NSPML's Transmission
2 route Right of Way (ROW), nominally 20%, to be addressed on an annual basis. In
3 addition, after the current treatment cycle, the grounding line will be cut over a multi-year
4 cycle nominally every 10 to 15 years as appropriate given the condition of the vegetation.

NSPML Vegetation Management Plan

1 Vegetation Management Overview

NSP Maritime Link (NSPML) implements a vegetation management program in conjunction with the overhead line maintenance program for all of its rights of way to manage the risk of tree caused interference with the safe and reliable operation of the system. The program also includes total vegetation control around physical assets and sites in addition to maintaining safe access both on and off the rights of way. This document provides the history of this aspect of operations and provides a future outlook for this activity. While generally applicable to NSPML assets across both provinces, Section 2 of this document focuses on the vegetation management activities in Newfoundland, as this represents the majority of NSPML's overland transmission routes and as NSPML's vegetation management requirements in Cape Breton (NS) is managed in consultation with, and delivered by, Nova Scotia Power (NSPI).

1.1 Background

After construction of the Maritime Link, NSPML developed a vegetation management program for its transmission asset rights of ways (ROWs) in both provinces. Prior to clearing of the ROW for the ML Project construction, NSPML obtained LiDAR data which informed vegetation management planning (post ROW construction). Where only minimal height vegetation growth was in place prior to the project, it is expected that limited or no vegetation control will be required.

For Nova Scotia, given the close adjacency of NSPML and NSPI assets, NSPML arranged vegetation management of the ROW to be planned and executed by NSPI and incorporated into its own planning and execution cycle. NSPI employs primarily a manual cutting strategy, executed when appropriate for the vegetation conditions. A Masters Services Agreement is in place with NSPI.

In Newfoundland, the extent of the ROW with minimal vegetation growth expected (from pre-clearing assessment) was estimated to be on the order of a third of the route. A program based primarily on herbicide application was initiated for the remainder of the ROWs for the initial cycle. In areas where herbicide use was restricted for environmental concerns, manual cutting was completed, which included the maintenance of riparian buffer zones previously established at watercourses.

The program commenced five years after the initial clearing of the right of way (2014) with a view to reinspecting and/or retreating the full ROW within a 10-year period from initial clearing. One full treatment cycle along the NL transmission lines has been completed, running from 2019-2023. NSPML has managed the program in-house and executed the program with contractors.

NSPML is currently moving toward a preventative vegetation management strategy that will direct management based upon the vegetative condition along each right of way. This is supported by a vegetation inventory that identifies species-level data needed to plan future treatments that best reflect changes in the vegetation condition. This is referred to as an Integrated Vegetation Management (IVM) approach, and considered industry best practice. The NSPML IVM program will use various techniques to measure and quantify the vegetative condition including the effectiveness of

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treatments method used using a combination of LiDAR, aerial photographs, in addition to aerial and foot patrol reconnaissance to collect data specifically to support future management of the vegetation.

To that extent, NSPML has recently completed an inventory that spatially locates changes in the vegetative condition across all of its overland linear assets for use in future management planning. The transmission lines are now organized into vegetation management units (VMU) that can optimize the scheduling of vegetation treatments based on a combination of sustainability considerations to ensure that treatment occurs in the appropriate places at the most efficient time.

2 Integrated Vegetation Management on Rights of Way

The right of way program utilizes an integrated vegetation management (IVM) strategy to ensure the optimal timing of treatments for selectively controlling the growth of incompatible vegetation while favouring the development of other plant communities compatible with the safe operation of a power line.

The IVM strategy is supported by a vegetation inventory and treatment options. Parameters such as species composition, species height, species density and terrain classification data are used to delineate the right of way into spatially located vegetation management units using a geographical information system (GIS). Access trails are characterized by use and condition. Treatments are prescribed and scheduled at the vegetation unit and access trail level.

NSPML's previous cyclical approach to vegetation management in operations has now shifted its focus to implement preventative treatments based upon the vegetation condition at the unit level. While a cycle of 7 years may be appropriate post treatment for many units, it may be longer or shorter depending on the terrain and other local conditions. Condition-based management allows for the optimal scheduling and treatment option for controlling vegetation and effectively controlling costs. It is also a more environmentally responsible approach to meeting NSPML's vegetation management objectives.

This meets both NSPML's management philosophy to minimize environmental impacts and align with the expectation of stakeholders, particularly those in the communities local to NSPML's transmission assets.

2.1 Program Implementation

For the foreseeable future, NSPML expects to establish a rolling annual to mid-term vegetation management outlook. The management frequency is expected to be approximately 7 years for most areas with the exception of "sustainable" areas.

Sustainable areas shall continue to represent on the order of one third of the right of way with minimal vegetation. As an aspect of the vegetation inventory collection, many units have been delineated based on aspects of sustainability. Ecological conditions such as wetlands, bogs and upland barrens have been

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identified as such and will be avoided for their protection. The management of these areas is nominally at a 10-year interval and as for the rest of the program, on a condition basis.

Annual and short-term (1-3 year) management planning is to include all vegetation units that meet treatment thresholds for cutting or herbicide application, access management, and total vegetation (weed) control at stations and ancillary sites.

Mid-term (4-7 year) management planning will be based upon the predictability of growth and vegetative conditions meeting treatment thresholds on the rights of way and will include access trail maintenance and total vegetation control at stations.

Herbicides use will be reduced by directing spray activities to areas dominant in hardwood (deciduous) growth and be applied selectively to primarily control the re-growth of those species that re-sprout after cutting.

2.2 Program Management & Review

The Engineering Manager or their delegate is responsible for the program.

NSPML site staff will oversee the implementation of the program, deploying internal or external resources to perform the on-site representative (OSR) function to generally administer and oversee the contract work in the field.

Qualified contractors will implement the program and provide input for updating vegetation management unit inventory data

The vegetation inventory is to be updated / validated using annual aerial reconnaissance (helicopter patrol), scheduled LiDAR and aerial imagery, as well as drone and line patrols where implemented.

Unknown potential risk associated with vegetation on the right of way identified by aerial inspection is to be field scoped by NSPML staff within a reasonable timeframe and subsequently managed as appropriate.

A Professional Forester with utility vegetation management expertise will support the program and provide input for updating the plans, including keeping the inventory assessment up to date.

NSPML will use the services of a GIS Technician to inform the inventory and data management aspects of the ongoing work. The GIS is to accommodate data from the inspection programs. Data associated with access and terrain and operability constraints will assist with the planning and implementation of maintenance activities.

The NSPML Vegetation Management Strategy will be re-visited in 2028.

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Request IR-12:

On Page 24 of 28, Section 5.3 2027 Station Control and Monitoring System (SCM), NSPML stated that the existing SCM system is about to be obsolete and need replacement.

- a) Please provide additional information describing the function and impact of the SCM system, including its components and the function of each component.**
- b) Please explain the expected useful life of the new SCM system.**
- c) Please explain how the new SCM system would affect the operation and functionality of the overall HVDC system, when compared to the existing system.**
- d) Does NSPML expect that an outage will be required to replace the SCM system? If so, please provide the expected duration of the outage.**

Response IR-12:

- a) Please see Confidential Attachment 1. The reliability risk profile will decrease with implementation as the current system has been in operation for approximately 10 years with the hardware nearing anticipated end of life (i.e. the failure rate of components is currently expected to increase). Furthermore, certain components of the SCM are approaching market obsolescence in which case they would no longer be available for purchase.
- b) The SCM is typically replaced near the halfway mark of the wider controls & protection system life, nominally 10 years in operation, which is the project currently being contemplated by NSPML. A useful life of 10 years has been assumed as the SCM system is expected to be replaced as part of a future controls & protection upgrade, nominally at the 20 years in operation date. The expected life of the new SCM system will be confirmed by NSPML in a future capital application.

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- 1 c) The new SCM should be seamless to the overall HVDC system operations as compared to
2 the existing system. The SCM includes the human-machine interface so the site staff will
3 see and use new devices, such as operational technology computers.
4
- 5 d) The degree of outage time required is to be determined and will be a function of the
6 approach taken. The base plan is for the work to be implemented during the annual planned
7 outage period. The outage expected for a full SCM replacement is 7-10 days. This would
8 be aligned with NSPML's annual outage, which typically overlaps with the Labrador Island
9 Link annual outage.

**NSEB IR-012 Attachment 1
has been removed due to confidentiality**