Newfoundland and Labrador
Board of Commissioners of Public Utilities

Newfoundland Power Inc.
2024 Rate of Return on Rate Base Application

Report date: April 5, 2024

Table of Contents

Executive summary

Project overview

Grant Thornton LLP (“we,” “us,” “our” or “Grant Thornton”) has been engaged as financial consultants to the Newfoundland and Labrador Board of Commissioners of Public Utilities (the “Board”). In this context, we have been asked to review Newfoundland Power Inc.’s (“Newfoundland Power”, the “Company”) 2024 Rate of Return on Rate Base Application (the “2024 Rate of RORB Application”) filed on November 23, 2023.

Scope of work

Our report outlines the results of our work and documents our observations, findings, and recommendations. Specifically, our work included the following:

- agreed carry-forward data to supporting documentation including audited financial statements for 2022 and forecast average rate base information provided by the Company for forecast 2023;
- recalculated average rate base, rate of return on rate base and capital structure proposed in the Application for 2024;
- agreed the average rate base calculation, rate of return on rate base and common equity ratio for 2024 are in accordance with Board’s determinations as approved in P.U. 3 (2022) – Amended No. 2;
- recalculated the weighted average cost of capital (“WACC”) for 2024;
- compared the result of the above WACC calculation to the rate of return on rate base as proposed by the Company in the 2024 Rate of RORB Application;
- reviewed the Company’s calculation of the cash working capital allowance for any adjustments to the purchased power expense, documenting impacts on the determination of the revenue requirement, if any;
- reviewed any reported reconciling items between invested capital and rate base for consistency with prior General Rate Applications (“GRA”);
- reviewed the history of the Board’s transition from the invested capital method to the Asset Rate Base Method (the “ARBM”) for Newfoundland Power, the circumstances behind the move to the ARBM, the resulting impacts as well as how this method has been applied in the regulation of Newfoundland Power; and
- reviewed the approach used in the Application for the calculation of the proposed forecast 2024 rate base and rate of return on rate base used in determining the return component in Newfoundland Power’s revenue requirement and compared the 2024 Rate of RORB Application to the ARBM methodology for consistency.

Restrictions and limitations

This report was prepared for the Board for the purpose outlined in the “Project overview” and “Scope of work” sections of this report. It is not intended for general circulation or publication nor is it to be reproduced or used for any purpose other than that outlined herein without prior written permission in each specific instance. Notwithstanding the above, we understand that our report may be disclosed as a part of a public hearing process and will also be available on the Board’s website. We have given the Board consent to use our report for these purposes.

This report shall be used solely for the benefit of the Board and not for the benefit of any third-party. It may be relied upon only for the purpose for which the report is intended as contemplated and/or defined within the engagement. Grant Thornton recognizes no responsibility whatsoever, other than that owed to the Board as at the date which the report is given to the Board by Grant Thornton, for any unauthorized use of or reliance on the report.

Our scope of work is as set out throughout this report. The procedures undertaken during our review do not constitute an audit of financial information and consequently, we do not express an audit opinion on any financial information provided. Our opinions on other matters are outlined throughout this report.

Unless stated otherwise within the body of this report, Grant Thornton has referenced information provided by third-party sources in the preparation of this report. Where we have referenced third party information, we have included relevant footnotes throughout this report, a summary of which can be found in **Appendix A – Documents referenced**. At the time of this report, Grant Thornton believes this information to be reliable. We are not guarantors of the information referenced. In preparing our report and, except as stated, we have not audited or otherwise attempted to verify any of the underlying information or data contained in the documents referenced.

All analysis, information, and recommendations contained herein are based on the information available to Grant Thornton as of this report's date. We reserve the right, but will be under no obligation, to review and/or revise the contents of this report in light of any information which becomes known to us after the date of this report.

Summary findings, observations, and conclusions

The following represents a summary of our key findings and recommendations based on the procedures outlined throughout the report:

#	Report section	Findings, observations, and conclusions
1	Compliance with the Public Utilities Act	We compared the 2024 Rate of RORB Application with the Public Utilities Act requirements, particularly Section 78 and Section 80 and nothing has come to our attention that would suggest that the 2024 Rate of RORB Application is not in compliance with the methodology and approach referenced in Sections 78 and 80 of the Public Utilities Act.
2	Compliance with Board Orders	We compared the 2024 Rate of RORB Application with the requirements of Order Nos. P.U. 19 (2003), P.U. 32 (2007), P.U. 12 (2010), P.U. 25 (2011), P.U. 13 (2013), P.U. 18 (2016), P.U.2 (2019), P.U. 3 (2022), and P.U. 20 (2023). Based on our review of the aforementioned Board Orders, nothing has come to our attention that would suggest that the 2024 Rate of RORB Application is not in compliance with past Board Orders.
3	2024 Rate of RORB Application Analysis	1) We have reviewed the 2024 forecast average rate base calculation as follows: • traced plant investment, additions and deductions to/from rate base, cash working capital allowance, and materials and supplies allowance amounts to the underlying support provided by the Company to develop an understanding of how these figures are determined; • recalculated the Company's calculations; and

#	Report section	Findings, observations, and conclusions
		• checked the clerical accuracy of the calculation of average rate base for internal consistency within the Company's 2024 Rate of RORB Application. During our review, we did not note any discrepancies in the calculation of 2024 forecast average rate base. 2) We have reviewed the Company's calculation of the RORB by completing the following: • traced all figures included in the calculation to the relevant underlying support provided by the Company; and, • performed a recalculation to check the clerical accuracy of the return on rate base calculation. Based upon the procedures noted above, we did not note any discrepancies in the clerical accuracy of the 2024 rate of return on regulated rate base and regulated return on rate base calculation. 3) We reviewed the Company's calculation of the before recovery WACC and have found no discrepancies. 4) We reviewed the underlying support of the reconciling items between the average rate base and the average invested capital amounts and found no discrepancies. 5) We reviewed the response from Newfoundland Power regarding the Company's calculation of the cash working capital allowance for any adjustments to the purchased power expense and nothing has come to our attention that would suggest this explanation is unreasonable. 6) The difference between WACC and Rate of RORB in the 2024 Rate of RORB Application is largely due to reconciling items between invested capital and rate base, primarily the RSA. The example calculation of the RORB does not consider the impact of any reconciling items between invested capital and rate base. In a GRA, the test year forecast rebalances the RSA and this is not a material issue. However, in non-test years the reconciling items could be significant as the RSA is functioning without a rebalancing effect. 7) The 2024 Rate of RORB Application as filed by Newfoundland Power is prepared in accordance with the ARBM. The Company continues to have reconciling items between asset rate base and invested capital. The impact of those reconciling items can be volatile and there are periods in which the impact may be minimal and other periods where the impact is more significant. The impact in the 2024 Rate of RORB is more significant than it has been in other recent years. 8) As a result of applying ARBM the Company has calculated a rate of return on rate base (%) of 6.847% and a return on rate base of

#	Report section	Findings, observations, and conclusions
		approximately $93,126,000. We have found no errors omissions or exceptions in the Company's calculation of this return. However, if the invested capital method was applied the rate of return on rate base (%) would equal WACC at 6.682% and the return on rate base would be approximately $93,105,000.

Compliance with the Public Utilities Act

We assessed the 2024 Rate of RORB Application's compliance with the *Public Utilities Act* (the "Act"). We considered Section 78 of the Act which defines rate base as follows:

1) *Except as otherwise provided in this Act, the board may fix and determine a separate rate base for each kind of service provided or supplied to the public by a public utility, and may revise the base.*

2) *In fixing a rate base the board may, in addition to the value of the property and assets as determined under section 64, include*

   a) *an allowance for necessary working capital;*

   b) *organizational expenses to the extent of the sum that the public utility establishes to the satisfaction of the board as reasonable;*

   c) *cost in whole or in part of land or other property and assets acquired or held in reasonable anticipation of future requirements;*

   d) *costs and expenses of the making or checking of valuations referred to in subsection 65(3), but only to the extent not amortized in previous years;*

   e) *the part, that the board may determine, of the cost of energy, water, steam, heat or other distributable thing purchased by the public utility, either as supplementary to or instead of its own production;*

   f) *the part, that the board may determine, of the money paid for the use of plant or equipment leased, hired or shared by the public utility, either as supplementary to or instead of its own plant or equipment;*

   g) *an allowance, as determined by the board, for the costs of a plant of a public utility under construction;*

   h) *other fair and reasonable expenses which*

      i. *the board thinks appropriate and basic to the public utility's operation, and*

      ii. *has, with the approval of the board, been charged to capital account, but the expenses shall be allowed only to the extent not amortized in previous years.*

3) *For the purposes of this section, the board, from the appraised value of the property of the public utility concerned,*

   a) *shall exclude the value of a franchise, licence, permit or concession obtained or held by the public utility from or under a municipality or other public authority beyond the money paid to the municipality or other public authority as consideration for the franchise, license, permit or concession; and*

   b) *may exclude*

      i. *contributions in aid of construction or acquisition of property or assets, deferred income taxes, and*

      ii. *other amounts which the board considers it fair and just to exclude."*

We considered Section 80 of the Act which discusses annual earnings as follows:

1) *A public utility is entitled to earn annually a just and reasonable return as determined by the board on the rate base as fixed and determined by the board for each type or kind of service supplied by the public utility but where the board by order requires a public utility to set aside annually a sum for or towards an amortization fund or other special reserve in respect of a service supplied, and does not in the order or in a subsequent order authorize the sum or a part of it to be charged as an operating expense in connection with the service, the sum or part of it shall be deducted from the amount which otherwise under this section the public utility would be entitled to earn in respect of the service, and the net earnings from the service shall be reduced accordingly.*

2) *The return shall be in addition to those expenses that the board may allow as reasonable and prudent and properly chargeable to operating account, and to all just allowances made by the board according to this Act and the rules and regulations of the board.*

3) *Reasonable payments each year to former employees of a public utility who have retired and are receiving payments of supplemental income from the public utility are expenses that the board may allow as reasonable and prudent and properly chargeable to the operating account of the public utility. The board may use estimates of the rate base and the revenues and expenses of a public utility."*

We compared the above to the documentation included throughout the 2024 Rate of RORB Application and nothing has come to our attention that would suggest that the 2024 Rate of RORB Application is not in compliance with the methodology and approach referenced in Sections 78 and 80 of the Public Utilities Act.

Compliance with relevant Board Orders

Throughout the 2024 Rate of RORB Application the Company references several Board Orders. We identified the following Board Orders as being supporting documents to the 2024 Rate of RORB Application:

P.U. 19 (2003) – June 20, 2003	P.U. 18 (2016) – June 8, 2016
P.U. 32 (2007) - December 19, 2007	P.U.2 (2019) – January 24, 2019
P.U. 12 (2010) – April 20, 2010	P.U. 3 (2022) – Amended No. 2 – January 5, 2023
P.U. 25 (2011) – December 13, 2011	P.U. 20 (2023) – July 21, 2023
P.U. 13 (2013) – April 17, 2013	

As a result, we reviewed the 2024 RORB Application for compliance with the above Board Orders. The referenced Board Orders and associated documents having a significant importance in the understanding of the Company's rate base and desired return on rate base have been summarized below.

Order No. P.U. 19 (2003)

In Order No. P.U. 19 (2003), the Board's orders pertaining to rate base in the 2003 General Rate Application noted:

> *"Newfoundland Power shall move toward the adoption of the Asset Rate Base Method for determining rate base and beginning in 2003 shall incorporate the average deferred charges, as set out in its Application, to the average rate base"*
>
> *"Newfoundland Power shall calculate and file a revised average rate base and return on rate base for 2003 and 2004, based on its proposals in this Application, incorporating the changes set out in this Decision and Order, which include:*
>
> *i. A return on regulated common equity of 9.75% is to be used for calculating the weighted average cost of capital for the 2003 and 2004 test years and*
>
> *ii. The move to the Asset Rate Base Method of determining rate base"*
>
> *"Newfoundland Power shall file no later than its next general rate application a report on including in rate base the remaining reconciling items between rate base and invested capital as described in this Decision and Order."*

A report on the Asset Rate Base Methodology, June 2005

As a part of the Newfoundland Power 2006 Capital Budget Application (the "NP 2006 CBA"), the Company filed "A Report on the Asset Rate Base Methodology" dated June 2005 (the "2005 ARBM Report"). This report noted that the transition to ARBM began in 2003 with the Company including average deferred charges in the computation of average rate base as required by Order No. P.U. 19 (2003). Including deferred charges in rate base brought the Company much closer to the full implementation of the ARBM. However, at that point in time several reconciling items between rate base and invested capital remained.

The reconciling items assessed throughout the 2005 ARBM Report included the following:

1. Plant (primarily construction work in progress or "CWIP")
2. Material and supplies variance (actual vs. allowance)

3. Working capital (actual vs. allowance)
4. Corporate income tax deposit
5. Common equity (book vs. regulated)

In the 2005 ARBM Report, the Company indicated that moving to the ARBM would remove complications in converting the cost of capital to a return on rate base. The Company also noted that with the transition to the ARBM, there is no regulatory justification to change the way that rate base is calculated to further accommodate reconciling items. According to the Company, after implementing the ARBM the reconciliation of the five items identified above would no longer be required. However, we noted that further commentary was provided by the Company on these reconciling items as part of the 2008 General Rate Application which has been summarized below. In Order No. P.U. 30 (2005) the Board provided various decisions pertaining to the NP 2006 CBA but does not specifically address the reconciling items discussed above.

A Report on the Implementation of the Asset Rate Base Method, May 2007

In May of 2007, Newfoundland Power filed “A Report on the Implementation of the Asset Rate Base Method (the “2007 ARBM Report”) as part of the Company's 2008 General Rate Application (“2008 GRA”). This report raises the issue of the reconciling items between invested capital and rate base.

In this report the Company noted that:

> *“Newfoundland Power excludes assets from its rate base, such as construction work in progress ("CWIP"), if they are not yet used and useful in the provision of service. However, CWIP, because it exists, had to be financed and is therefore reflected in the Company's invested capital. Although rate base and invested capital would differ with respect to CWIP, the return should be the same under both the ARBM and invested capital method.*
>
> *Differences between invested capital and rate base also arise due to differences in how rate base and invested capital items are calculated. These differences exist with respect to working capital and materials and supplies inventory.*
>
> *Working capital and materials and supplies inventory are typically reflected in invested capital at the average of their opening and year-end amounts. However, working capital is usually included in rate base through a cash working capital allowance that reflects average daily working capital requirements. Materials and supplies inventory is usually included in rate base through a materials and supplies allowance that reflects monthly averages.*
>
> *For Newfoundland Power, differences between average invested capital and average rate base related to CWIP, the cash working capital allowance and the materials and supplies allowance will continue to exist under the ARBM. The proposals in this report serve to update the calculations underlying these Reconciling Items.*
>
> *Other differences between the Company's average invested capital and average rate base are related to other assets and liabilities, which are (i) customer finance program receivables, (ii) customer security deposits (iii) the accrued pension liability (iv) the accrued other post-employment benefits ("OPEBs") liability and (v) the municipal tax liability. These differences exist because Newfoundland Power has not yet completed its transition to the ARBM. The proposals in this report serve to eliminate these Reconciling Items.”*

Newfoundland Power 2008 General Rate Application

In addition to the changes to the reconciling items noted above, Newfoundland Power's 2008 GRA, dated May 10, 2007, proposes changes to the AAF in relation to the ARBM. Specifically, the Company indicated that:

> *"As a result of Newfoundland Power's completion of the transition to the ARBM of calculating rate base, the arithmetic operation of the Formula will require modification."*

Footnote 51 to the 2008 GRA included the existing AAF as follows:

$$\textbf{Rate of Return on Rate Base (\%) =} \left[\frac{Invested\ capital}{Rate\ base} \times WACC\right] + \left[\frac{Z}{Rate\ base}\right]$$

"Where Z represents amounts which are recognized in the calculation of either weighted average cost of capital or rate of return on rate base, but not both. These amounts include:

a) *Amortization of Capital Stock Issue Expenses (Recognized in the rate of return on rate base calculation but not the weighted average cost of capital calculation)*
b) *Interest on Customer Deposits (Recognized in the weighted average cost of capital calculation but not the rate of return on rate base calculation)*
c) *Interest Charged to Construction (Recognized in the rate of return on rate base calculation but not the weighted average cost of capital calculation)"*

Newfoundland Power proposed that the appropriate arithmetic expression of the AAF following the transition to the ARBM be modified as follows:

Return on Rate Base ($) = [Rate Base[1] x WACC[2]]

Whereas:
1 *- rate base equals the most recent test year average rate base.*
2 *– weighted average cost of capital is derived from the capital structure approved in the most recent GRA, cost of debt is based on the most recent GRA, and the cost of equity is adjusted annually based on the calculation of a risk free rate.*

Appendix B provides an example of how WACC was calculated under the AAF for 2011.

The above change was proposed as continued use of the invested capital Z factor as shown in the previous Formula was not required following the transition to the ARBM.

Order No. P.U. 32 (2007)

In Order No. P.U.32 (2007) the Board addresses the matters raised as a part of the 2008 GRA as follows:

> *"The Settlement Agreement states: the parties agreed with NP's implementation of the Asset Rate Base method as set forth in the Application [2008 GRA]".*

Furthermore, Order No. P.U. 32 (2007) also notes:

> *"The Settlement Agreement states: "The Automatic Adjustment Formula, reflecting the adoption of the Asset Rate Base Method as proposed in the Application, should operate in accordance with the existing methodology used by the Board to set rates for not more than three (3) years following the 2008 Test Year."*

Inconsistency in presentation of reconciling items

During our review of the above filings, we noted that there was inconsistency between the reconciling items as presented in the 2005 ARBM Report and those presented in the 2007 ARBM Report. We have compared the reconciliations of average invested capital to average rate base as presented in our Newfoundland Power Inc. 2003 General Rate Hearing Supplementary Evidence, dated April 4, 2003 ("GT Supplementary Evidence"), the 2005 ARBM Report, and the 2007 ARBM Report. This comparison is summarized below:

(000s)	GT Supplementary Evidence	2005 ARBM Report	2007 ARBM Report	2007 ARBM Report
	2004 P	2004 A	2008 TY (before ARBM proposals)	2008 TY (after ARBM proposals)
Average invested Capital	700,244	706,427	815,856	812,488
Average rate base	703,102	715,111	819,071	809,291
	(2,858)	(8,684)	3,215	(3,197)
Reconciling items:				
CWIP	1,674	179	(2,314)	(2,314)
Materials and supplies	773	674	(957)	(1,023)
Working capital	(20,957)	(25,539)	(2,387)	140
Corporate income tax deposit	6,949	6,949	-	-
Common equity (book vs. regulated)	8,703	9,053	-	-
Customer finance programs receivable	-	-	(1,728)	-
Customer security deposits	-	-	736	-
Accrued pension liability	-	-	3,003	-
Accrued OPEBs liability	-	-	3,183	-
Municipal tax liability	-	-	3,679	-
	(2,858)	(8,684)	3,215	(3,197)

Note: The GT Supplementary Evidence and 2005 ARBM Report presents the variance by subtracting average rate base from average invested capital. However, in the 2007 ARBM Report, the variance was presented by subtracting average invested capital from average rate base. We have kept presentation consistent with how the variance was calculated in each respective report for clarity.

As the above summary table indicates, when the GT Supplementary Evidence was filed in 2003 we identified five reconciling times between rate base and invested capital that required further analysis. Subsequently, the 2005 ARBM Report confirmed that the Company expected that after implementing ARBM, the reconciliation of the five items identified would no longer be required. However, in the 2007 ARBM report the Company provided further evidence which clarified that while the transition to the ARBM would address some of the reconciling items between invested capital and rate base there were some reconciling items remaining. This remaining items included the following:

- CWIP;
- Materials and supplies; and,
- Working capital.

As part of the 2008 GRA we understand that the Board approved the transition to the ARBM in Order No. P.U. 32 (2007).

Order No. P.U. 12 (2010)

On March 12, 2010, the Company submitted an application pertaining to the 2011-2012 risk free rate of return included in the AAF. In connection with this Application the Board issued Order No. P.U. 12 (2010) which states:

> *"The risk free rate used to calculate the forecast cost of equity for use in the Automatic Adjustment Formula to establish Newfoundland Power's annual rate of return on rate base for 2011 and 2012 shall be determined by adding: (a) the average of the 3-month and 12-month forecast of 10-year Government of Canada Bonds as published by Consensus Forecasts in the preceding November; and (b) the average observed spread between 10-year and 30-year Government of Canada Bonds for all trading days in the preceding October."*

Order No. P.U. 25 (2011)

On November 23, 2011, the Company submitted an application asking the Board to make an Order suspending the operation of the AAF to establish a rate of return on rate base for Newfoundland Power for 2012. Upon reviewing a series of evidence filed by the Company in support of this proposal, the Board stated the following decision in Order No. P.U. 25 (2011):

> *"The operation of the Formula to establish a rate of return on rate base for Newfoundland Power for 2012 is suspended."*

Order No. P.U. 13 (2013)

On April 17, 2013, the Company submitted the 2013/2014 General Rate Application. Following their review, the Board issued Order No. P.U. 13 (2013) which stated:

> *"While the Board continues to see the value of an automatic adjustment formula, the evidence is clear that the formula as it is currently structured may not result in a fair return for Newfoundland Power in the current circumstances. Long-term Canada bond yields are abnormally low which is particularly problematic in the operation of the automatic adjustment formula. In the absence of a clear relationship between the long-term Canada bond yield and the cost of equity it is difficult to see that the established return can be appropriately adjusted for 2015 without the exercise of further judgement. Dr. Booth and Mr. MacDonald offered opinions as to changes that could be made to the formula to account for the unusual financial conditions. Ms. McShane and Ms. Perry doubted whether the current financial conditions could be effectively addressed in the formula. The Board accepts that in the circumstances it would be difficult to conclude that any formula could be relied on to establish a fair rate of return after the test years.*
>
> *Newfoundland Power has applied for rates to be established based on two test years, 2013 and 2014. Newfoundland Power states that a three-year interval between general rate applications appears reasonable and given this timeframe its next general rate application would be filed in June 2015 for a 2016 test year. The Board agrees with Newfoundland Power that a three-year period between general rate applications is generally consistent with sound utility regulation.*
>
> *Newfoundland Power states that it prefers the certainty of setting a rate of return for a period of time. The Board notes that the experts forecast a period of relative stability in the bond markets with continued low long-term Canada bond yields and a gradual return to normal levels over the next several years. Dr. Booth suggests that the Board could set a rate of return for five years, though this suggestion was rejected by the Consumer Advocate.*
>
> *Given the Board's reservations in relation to the use of the formula in the circumstances the Board finds that, in the interests of regulatory efficiency and certainty, it is appropriate to continue*

Newfoundland Power's rate of return on common equity at 8.8% for 2015. The Board will monitor economic conditions throughout the period and, in accordance with normal process, if there is a dramatic change in circumstances which suggest that the established rate of return is unfair an application can be filed by Newfoundland Power or directed by the Board. To be clear the Board is not discontinuing the use of the automatic adjustment formula and, in the absence of a further Order of the Board, it will be used to establish a fair return for Newfoundland Power following its next general rate application

The Board will not order the use of the formula to establish the rate of return after the 2013 and 2014 test years. The Board accepts that a ratemaking return on common equity of 8.8% in 2015, with a deemed common equity component of 45%, will provide Newfoundland Power the opportunity to earn a just and reasonable return on rate base that is consistent with the fair return principle and the provision of least cost reliable power."

For the period from 2013 to 2023

Since 2013, the Company's rate of return on rate base (%) and return on rate base ($) has been set through either a GRA or a specific rate of RORB application. In response to NLH-NP-005 the Company provided information pertaining to the results of the filings and the associated Board Orders. We have summarized this information below:

Range and rate of RORB	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Note 1	GRA	GRA	RRORB	GRA	GRA	RRORB
Order No. setting approved range	P.U. 23 (2013)	P.U. 23 (2013)	P.U. 51 (2014)	P.U. 25 (2016)	P.U. 25 (2016)	P.U. 41 (2017)
Approved range of rate of RORB (%)	7.74 to 8.10	7.70 to 8.06	7.32 to 7.68	7.03 to 7.39	7.01 to 7.37	6.86 to 7.22
Midpoint of approved range (%)	7.92	7.88	7.50	7.21	7.19	7.04
Actual/forecast rate of RORB (%)	8.11	7.83	7.48	7.31	7.22	7.13
Rate of RORB variance (%)	0.19	-0.05	-0.02	0.10	0.03	0.09
Within the approved range of rate of RORB? - ***Note 2***	N/A	N/A	**Yes**	N/A	N/A	**Yes**
Impact on rates to customers? - ***Note 2***	N/A	N/A	**No**	N/A	N/A	**No**
Regulated earnings						
Approved regulated earnings when setting rates ($000s)	37,332	38,716	39,786	41,010	42,638	42,072
Actual/forecast regulated earnings ($000s)	38,605	39,829	41,113	42,887	43,988	43,929
Regulated earnings variance ($000s)	1,273	1,113	1,327	1,877	1,350	1,857

Range and rate of RORB	**2019**	**2020**	**2021**	**2022**	**2023F**
Note 1	GRA	GRA	RRORB	GRA	GRA
Order No. setting approved range	P.U. 2 (2019)	P.U. 2 (2019)	P.U. 36 (2020)	P.U. 3 (2022)	P.U. 3 (2022)
Approved range of rate of RORB (%)	6.83 to 7.19	6.86 to 7.22	6.47 to 6.83	6.43 to 6.79	6.21 to 6.57
Midpoint of approved range (%)	7.01	7.04	6.65	6.61	6.39
Actual/forecast rate of RORB (%)	6.97	7.04	6.74	6.72	6.85
Rate of RORB variance (%)	(0.04)	0.00	0.09	0.11	0.46
Within the approved range of rate of RORB? - ***Note 2***	N/A	N/A	**Yes**	N/A	N/A
Impact on rates to customers? - ***Note 2***	N/A	N/A	**No**	N/A	N/A
Regulated earnings					
Approved regulated earnings when setting rates ($000s)	44,250	45,632	44,426	47,233	49,202
Actual/forecast regulated earnings ($000s)	45,395	46,469	46,278	47,914	51,059
Regulated earnings variance ($000s)	1,145	837	1,852	681	1,857

Note 1 *- For clarity we have indicated above if the rate of return on rate base (%) and return on rate base ($) was approved in the Company's General Rate Application (GRA) or a specific Rate of Return on Rate Base (RRORB) Application.*

Note 2 *- For the prior RRORB years (2015, 2018, 2021), we compared the forecasted rate of RORB to the range of rate of RORB approved in the RRORB application. In each of the prior RRORB years, we noted that the rate of RORB was within the set range. As a result, these RRORB years did not result in an increase to customer rates.*

The 2024 forecasted rate of RORB before recovery is presented in Appendix D of the 2024 Rate of RORB Application as 6.21%. This is below the range of rate of RORB proposed in the 2024 Rate of RORB Application (6.67% to 7.03%). As a result, the 2024 Rate of RORB Application proposes an increase to customer rates.

Additionally, the AAF has continued to be suspended throughout this time period.

Based on our review of the aforementioned Board Orders, nothing has come to our attention that would suggest that the 2024 Rate of RORB Application is not in compliance with past Board Orders.

2024 Rate of RORB Application – Analysis

Order No. P.U. 3 (2022) - Amended No 2 issued on January 5, 2023, covered a variety of topics including the following which pertains to the 2024 Rate of RORB Application:

> *"Newfoundland Power shall file an application on or before November 15, 2023 for approval of the 2024 forecast average rate base and rate of return on rate base, maintaining the common equity ratio and return on common equity accepted for rate setting in this Order."*

On November 9, 2023 the Company filed the 2025/2026 General Rate Application which included evidence regarding rate base and the desired return on rate base for 2024. On November 17, 2023, the Board directed the Company to file a separate application relating to approval of its 2024 forecast average rate base and rate of return on rate base. The following section explains the results of our analysis of the Company's 2024 Rate of RORB Application.

Newfoundland Power's 2024 forecast average rate base

Based on the information provided by the Company in Appendix A of the 2024 Rate of RORB Application, the forecast 2024 average rate base is $1,360,058,000. The 2024 forecast average rate base reflects the Company's calculation of actual average rate base for 2022 and forecast average rate base for each of 2023 and 2024. The following table shows a comparison of the Company's average rate base calculation for 2023 test year, 2023 forecast, and 2024 forecast, outlining the variances:

000's	**2023 TY**	**2023 F**	**2024 F**
Average rate base **(1)**	1,287,450	1,289,706	1,360,058
Change $ **(2)**		2,256	70,352
Change % **(2)**		0.18%	5.45%

(1) The 2023 test year calculation of average rate base was forecasted in the 2022-2023 GRA and approved in Order No. P.U.3 (2022) – Amended No. 2.
Both the 2023 and 2024 forecast average rate base were forecasted by the Company in Appendix A of the 2024 Rate of RORB Application.

(2) The total change in average rate base from 2023 test year to the 2024 forecast is approximately $72,608,000 ($2,256,000 + $70,352,000). The Company explains the difference on pages 3 and 4 of the 2024 Rate of RORB Application as follows:

- "*Changes in plant investment reflect capital expenditures included in the Company's 2024 Capital Budget Application currently under review by the Board and changes in depreciation reflect depreciation rates approved by the Board."* During our review we noted that the plant investment line item represents a change of approximately $99,712,000. This primary relates to the 2024 Capital Budget Application in which the Company requested $115,252,000. Since the 2024 Rate of RORB Application was filed we noted that the Board has approved $114,252,000 in Order No. P.U. 2 (2024) reflecting a $1,000,000 difference.

- "*Changes in additions to, and deductions from, rate base also affect the calculation of 2024 forecast average rate base. These items include a combination of specific Board orders, operation of approved regulatory mechanisms, and longstanding regulatory practice. For* *example, 2024 forecast changes in employee future benefit related balances result in an increase of approximately $1.6 million in 2024 average rate base compared to the 2023 forecast average rate base used to establish existing customer rates. The inclusion of employee future benefits in rate base was approved by the Board in Order Nos. P.U. 19 (2003) and P.U. 31 (2010). Similarly, Board approved regulatory mechanisms, such as the Weather Normalization Reserve, can impact the annual calculation of rate base. These changes are reflected in the calculation of the 2024 forecast average rate base. Smaller items, such as customer finance programs and customer security deposits, are determined in accordance with longstanding regulatory practice. 2024 forecast average rate base also includes the proposed deferred cost recovery for 2024*."

- We also noted that the 2024 forecast average rate base includes the impact of the 2023 excess earnings account ($3,566,000). In response to PUB-NP-007, the Company provides options for how the 2023 excess earnings account may be used.

We have reviewed the 2024 forecast average rate base calculation as follows:

- traced plant investment, additions and deductions to/from rate base, cash working capital allowance, and materials and supplies allowance amounts to the underlying support provided by the Company to develop an understanding of how these figures are determined;

- recalculated the Company calculations; and

- checked the clerical accuracy of the calculation of average rate base for internal consistency within the Company's 2024 Rate of RORB Application.

During our review, we did not note any discrepancies in the calculation of 2024 forecast average rate base.

Newfoundland Power's return on rate base

As detailed in Appendix B of the 2024 Rate of RORB Application, the Company's 2024 regulated rate of return on rate base is 6.85%, in a range of 6.67% to 7.03%.

The following table shows a comparison of the Company's 2023 test year and 2024 regulated return on rate base ($) and regulated rate of return on rate base (%):

000's	**2023 TY (1)**	**2024 regulated RORB(2)**	**Variance (3)**
Regulated return on equity	49,202	51,498	2,296
Finance charges			
Interest on long-term debt	34,945	39,053	4,108
Other interest	909	3,635	2,726
Amortization of bond issue expenses	183	225	42
AFUDC	(2,964)	(1,285)	1,679
	33,073	41,628	8,555
Return on rate base	**82,275**	**93,126**	**10,851**
Average rate base	1,287,450	1,360,058	72,608
Rate of return on rate base (%)	**6.39%**	**6.85%**	**0.46%**

(1) 2023 test year figures included in the rate of return on rate base were proposed in the 2022-2023 GRA – Amended Application and approved in Order No. P.U.3 (2022) – Amended No. 2.

(2) The 2024 regulated return on rate base is calculated in Appendix B of the 2024 Rate of RORB Application with the breakdown of finance charges displayed in Appendix D (pg.3). We have reviewed this calculation by completing the following:

- traced all figures included in the calculation to the relevant underlying support provided by the Company;
- reperformed the rate of return on rate base, and return on rate base calculation; and,
- checked the clerical accuracy and internal consistency of the rate of return on rate base, and return on rate base calculation.

(3) The $10,851,000 increase in return on rate base calculated above is the revenue shortfall calculated by the Company before factoring in the impact of corporate taxes.

The Company explains the difference of 46 basis points between the 2024 regulated rate of return on rate base and the 2023 test year rate of return on rate base on pages 4 and 5 of the 2024 Rate of RORB Application. This explanation is as follows:

> *“The primary reason for the increase is a higher forecast cost of debt. The 2024 forecast cost of debt of 5.27% is 60 basis points higher than the cost of debt of 4.67% currently reflected in customer rates.*
>
> *The higher cost of debt is the result of financing arrangements which were approved by the Board under Section 91 of the Act. In Order No. P.U. 20 (2023), the Board approved the Company's issue of 5.122% First Mortgage Bonds in an amount of $90 million. In Order No. P.U. 22 (2008), the Board approved the Company's current committed credit facility. Under this facility, the Company is forecasting 2024 short-term debt costs of approximately 5.5%.*
>
> *Increases in debt costs since existing customer rates were established as part of the Company's 2022/2023 General Rate Application reflect significant increases in the Bank of Canada's benchmark interest rate over that timeframe. From March 2022 to July 2023, the Bank of Canada increased its interest rate 10 times for a total increase of 4.75%.”*

Based upon the procedures noted above, we did not note any discrepancies in the clerical accuracy of the 2024 rate of return on regulated rate base and regulated return on rate base calculation.

Newfoundland Power's weighted average cost of capital calculation

The Company presented their 2024 weighted average cost of capital ("WACC") calculation in Appendix B of the 2024 Rate of RORB Application. The following table presents the Company's WACC for the 2023 test year and the 2024 existing regulated ("R") RORB.

	2023 TY (1)	2024 R (2)
Average capital structure (3)		
Debt	55.04%	56.76%
Common equity	44.96%	43.24%
	100.00%	100.00%
Cost of capital (4)		
Debt	4.67%	5.27%
Common equity	8.50%	8.50%
Weighted average cost of capital (5)		
Debt	2.57%	2.99%
Common equity	3.82%	3.68%
	6.39%	**6.67%**

(1) 2023 test year figures included in the calculation of WACC were approved in Order No. P.U.3 (2022) – Amended No. 2.

(2) 2024 forecast before recovery WACC is calculated in Appendix B of the 2024 Rate of RORB Application.

(3) We traced the capital structure included in the 2024 Rate of RORB Application to the underlying capital structure detailed support provided by the Company to develop an understanding of how these figures are determined. We also traced the capital structure to Order No. P.U.3 (2022) – Amended No. 2 and found it to be within the deemed common equity cap of 45% accepted by the Board.

(4) Additionally, we traced the cost of debt to the underlying capital structure support provided by the Company. Furthermore, we reviewed the cost of financing and forecasted interest rate support provided by the Company to support from external financial institutions to develop an understanding of this forecasted amount and found no exceptions. The cost of common equity amount of 8.50% agrees to Order No. P.U.3 (2022) – Amended No. 2, which requires the rate of return on rate base to be calculated maintaining the ratemaking common equity of 8.50%.

(5) Finally, we reperformed the Company's calculations of the WACC and noted no exceptions.

We reviewed the Company's calculation of the 2024 before recovery WACC and have found no discrepancies.

Newfoundland Power's rate of return on rate base vs. weighted average cost of capital

In footnote 52 on page 61 of the Newfoundland Power 2008 GRA the Company notes that:

> *"Conceptually, under the ARBM there will be no unreconciled difference between invested capital and rate base in the calculation of the rate of return on rate base. Under the ARBM, the weighted average cost of capital effectively becomes the rate of return on rate base."*

We reviewed the Company's WACC in comparison to the rate of return on rate base in each of the following years and noted the following:

(%)	2021F (1)	2022 TY (2)	2023 TY (2)	2024F (3)
Note 1	*RRORB*	*GRA*	*GRA*	*RRORB*
Rate of return on rate base	6.65%	6.61%	6.39%	6.85%
Weighted average cost of capital	6.67%	6.61%	6.39%	6.67%
Difference	**0.02%**	**0.00%**	**0.00%**	**(0.18%)**

Note 1 *- For clarity we have indicated above whether each year contained a General Rate Application (GRA) or a specific Rate of Return on Rate Base Application (RRORB).*

(1) *Newfoundland Power 2021 Rate of RORB Application*
(2) *Newfoundland Power 2022/2023 General Rate Application*
(3) *Newfoundland Power 2024 Rate of RORB Application*

We noted that previously the WACC equaled the Company calculated rate of return on rate base. However, in the 2024 Rate of RORB Application there was a difference between the WACC and the rate of RORB. We investigated this difference through inquiry of Company management. In response to this question, they explained:

> *"Under the Asset Rate Base Method ("ARBM"), differences in invested capital and rate base exist related to construction work in progress, materials and supplies, and cash working capital amounts. These reconciling items can cause differences between Newfoundland Power's WACC and its rate of return on rate base."*

The Company provided a summary of the average rate base versus the average invested capital amounts to demonstrate the balance of the reconciling items in recent years. A copy of this table is included below:

($millions)	2021 F	2022 TY	2023 TY	2024 F
Average rate base (A)	1,206	1,239	1,288	1,360
Construction WIP	10	21	16	8
Materials and supplies	2	2	2	4
Cash working capital	(17)	(24)	(19)	21
Average invested capital (B)	**1,201**	**1,238**	**1,287**	**1,393**
Difference (B - A)	**(5)**	**(1)**	**(1)**	**33**
Difference: WACC vs Rate of RORB	**0.02%**	**-**	**-**	**(0.18%)**

As noted in the table on the previous page, the reconciling items largely offset each other for 2021 forecast, 2022 test year and 2023 test year. We noted that the three reconciling items are consistent in nature to the reconciling items that were outlined in the 2007 ARBM Report.

We reviewed the underlying support of the reconciling items between the average rate base and the average invested capital amounts and found no discrepancies.

The larger variance in the 2024 forecast is primarily the result of higher cash working capital requirements. The Company provided further details pertaining to this line item as follows:

($millions)	**2024F**
Accounts receivable, prepaids and accounts payable	(28.8)
2024 Energy Supply Cost Variance Account (“ESCV”)	18.2
Rate Stabilization Account	39.8
Deferral accounts and other	(0.5)
Rate base allowance	(7.7)
Total difference	**21.0**

The Company indicated that the main drivers of the $21.0 million cash working capital reconciling item are as follows:

- **Higher purchased power costs** – according to the Company, purchased power costs are primarily recovered through the Company’s energy supply cost variance account (“ESCV”) which transfers to the Rate Stabilization Account (“RSA”) at December 31st of each year. The Company is forecasting to finance $36.4 million in additional purchased power costs throughout 2024, which represents an average of $18.2 million in financing requirements in 2024; and,
- **Rate stabilization account balance** – according to the Company, beyond the 2024 ESCV amounts, the RSA balance is also contributing to the difference noted above based on the 2023 ESCV transfer as well as other RSA activity.

According to the Company, larger variances in forecast cash working capital requirements compared to the rate base allowance have occurred since the current wholesale rate was implemented on October 1, 2019. For 2020, 2021 and 2023 these variances did not create an overall significant difference between invested capital and rate base because the cash working capital variance was partially offset by construction WIP and materials and supplies. In the 2024 forecast we are seeing the combination of several factors 1) energy sales out pacing the Company’s load forecast from the 2022/2023 GRA, 2) volatility in power supply costs since the 2019 wholesale rate was set, and 3) the impact of the cash working capital is not currently being offset by the construction work in progress and material and supplies reconciling items. We understand that Newfoundland Power has adjusted its 2025 and 2026 test year forecasts to lessen the impact of this volatility.

We understand that Newfoundland Power is currently in discussions with Newfoundland and Labrador Hydro (“Hydro”) on the possibility of implementing a new wholesale rate on January 1, 2025. The Company anticipates the volatility in its cash flow working requirements to be greatly reduced upon the implementation of a new wholesale rate.

The Company also indicated that:

> *“In Newfoundland Power’s 2022/2023 GRA, in an effort to lessen the impact of the volatility of power supply cash flow effects, the Company removed RSA balances from its proposed test year forecasts. This adjustment served to align the Company’s average invested capital and its rate base for the 2022 and 2023 test years.”*

The Company goes on to say:

> *"While these adjustments aligned WACC and rate of RORB, they did not materially impact the Company's overall 2022 and 2023 test year revenue requirements. Newfoundland Power also removed interest associated with the RSA balances, which is included in the other revenue component of revenue requirement, which has an offsetting effect on the return on rate base."*

The impact of removing the RSA balances on the 2023 test year revenue requirement as illustrated by the Company is as follows:

Adjustment to the 2023 test year to align invested capital and rate base
Pro forma 2023 revenue requirement impact

($ millions)		**2023 TY**
Higher (lower) average invested capital	**(1)**	17.4
Revenue requirement impact:		
Addition to revenue requirement: return on rate base	**(2)**	1.1
Deduction from revenue requirement: other revenue	**(3)**	(0.9)
Total addition revenue requirement impact		**0.2**

(1) The 2022 and 2023 forecast year end RSA balances were ($27.7) million and ($7.2 million), which provides for a 2023 average balance of ($17.4) million. This credit balance (i.e. owing to customers) was removed from the 2023 test year forecast, which resulted in an increase in 2023 average invested capital.

(2) Based on the cost of financing Newfoundland Power's cash working capital being its incremental WACC. For the 2023 test year, incremental WACC was 4.75% (8.50% equity and 1.7% associated with its credit facility). $17.4 million x 4.75% = 0.8 million + tax impacts on the equity portion of $0.3 million = $1.1 million).

(3) 2023 RSA interest forecast based on the 2023 test year rate of RORB of 6.39% and monthly RSA activity. As the RSA balance was in a credit position, the adjustment resulted in an increase in other revenue of $0.9 million. When determining base rate revenue requirements, other revenue is deducted from Newfoundland Power's revenue requirement.

According to the Company, the revenue requirement adjustments explained above were not completed for previous versions of the Rate of Return on Rate Base Applications (2015, 2018 and 2021). The Company noted that in those applications, only the return on rate base component was revised, not all components of the Company's revenue requirement, which includes other revenue. Overall, the 2024 Rate of RORB Application follows the same approach used in those previous applications. However, the outcome of the 2024 Rate of RORB Application differs from past applications. In Appendix D of the 2024 Rate of RORB Application, the 2024 forecasted before recovery rate of RORB is presented by the Company as 6.21%. This is below the range of rate of RORB proposed in the 2024 RRORB Application (6.67% to 7.03%). As a result, the 2024 Rate of RORB Application causes an increase to customer rates. In non-GRA test years, the Company is only permitted to revise the return on rate base and as such all other components of revenue requirement are not considered in Rate of RORB Applications.

For illustrative purposes, the Company provided the below table estimating the impact that removing RSA balances would have on the 2024 forecast in the 2024 Application, assuming 2024 was a test year with all revenue requirement components being revised.

Adjustment to 2024 forecast to align invested capital and rate base
Pro forma revenue requirement impact

($ millions)		**2024 PF**
Higher (lower) average invested capital	**(1)**	(35.4)
Revenue requirement impact:		
Deduction from revenue requirement: return on rate base	**(2)**	(2.2)
Addition to revenue requirement: other revenue	**(3)**	3.0
Total addition to revenue requirement		**0.8**

(1) Estimated as 2024 RSA balance of $39.8 million adjusted for higher invested capital of $4.4 million associated with 2024 Revenue Shortfall at 8.50% (net of income taxes) [$8,845 / 2 = $4,423]. Order No. P.U. 3 (2022) requires the rate of RORB to be calculated maintaining the ratemaking common equity of 8.50%. If this balance was removed from the 2024 forecast, it would lower 2024 average invested capital by $35.4 million.

(2) Based on the Company's financial position in 2024, the financing impact is estimated using its 2024 average credit facility rate of 5.5%.

(3) 2024 RSA interest forecast based on the 2023 test year rate of RORB of 6.39% and monthly RSA activity. As the RSA balance is in a debit position (i.e. owing from customers), the adjustment would result in a decrease in other revenue of $3.0 million.

According to the Company, the estimated adjustments would lower the 2024 average invested capital to closely align with the 2024 average rate base figure. The adjustment would also bring the 2024 rate of return on rate base to an estimated 6.67%, which would align with the WACC outlined in the 2024 Rate of RORB Application of 6.67%.

The Company also noted that, from a revenue requirement perspective, the 2024 return on rate base component would be reduced due to the lower financing requirements. In a test year setting, the removal of RSA interest in the other revenue component of revenue requirement would more than offset the return on rate base impact, which would result in an overall increase in 2024 revenue requirement. However, according to the Company, unlike a test year, the adjustment to other revenue for the removal of the related RSA interest would not occur given the scope of the 2024 Rate of RORB Application.

While the full impact of 2024 revenue requirement has not been contemplated in the Company's 2024 Rate of RORB Application, we did perform some inquiry procedures on these figures. The results of this analysis have been presented in **Appendix C** to this report.

Impact of the higher purchased power costs

As noted previously, the Company indicated that the higher cash working capital allowance for 2024 was primarily due to higher purchased power costs. This is consistent with their response to PUB-NP-015 (b). To clarify the impact, we asked the Company if an adjustment is required to be made to the purchased power expense applied in derivation of the cash working capital allowance to be included in rate base given that a material portion of Newfoundland Power's increased purchased power expense between test years is recovered through the RSA, with finance costs applied to the balance based on WACC. We asked the Company to explain why making no adjustment to purchased power expense in the calculation of the cash working capital allowance to reflect the return earned on the balance in the RSA would not result in duplication of return.

The Company responded as follows:

> *"The cash working capital allowance included in Newfoundland Power's rate base is based on the lead/lag study completed as part of its 2022/2023 GRA and was based on 2020 actual information. With respect to purchased power costs, the expense lag was calculated by analyzing the average number of lag days between when the purchased power invoice is received and when payment is made to Hydro. The weighted average lag was approximately 29 days.*
>
> *Since the 2023 test year power supply costs have increased, however the expense lag determined in the 2022/2023 GRA remains the same. So, the increase in the cash working capital allowance related to purchased power costs simply reflects that in 2024 the Company is forecasting to finance a higher level of purchased power costs during that average lag of 29 days.*
>
> *The cash working capital allowance only considers the lag in the monthly purchased power invoice explained above and does not take into consideration the lag associated with the recovery of purchased power cost variances from the latest test year. As such, no adjustment to purchased power component of the cash working capital allowance is necessary."*

We reviewed the above response from Newfoundland Power regarding the Company's calculation of the cash working capital allowance for any adjustments to the purchased power expense and nothing has come to our attention that would suggest this explanation is unreasonable.

Newfoundland Power's AAF

Since the suspension of the AAF in 2012, the Company has been performing their calculation of the rate of return on rate base in a separate Application for non-test years. There is no expressly stated formula approved by the Board to be used in the calculation of return on rate base. Therefore, we noted no instances of non-compliance with Board Orders.

Newfoundland Power's Illustrative Return on Rate Base

We considered different approaches to calculating the return on rate base. To illustrate an alternative calculation we have prepared the following:

Return on Rate Base = [Rate Base x WACC]

Using the above formula, the return on rate base would be calculated as follows:

(000's)	**2024F**
2024F after recovery average rate base at year end	1,360,058
Less: impact of 2024 recovery	(2,374)
2024F before recovery average rate base at year end (Note 1)	1,357,684
2024F weighted average cost of capital (%) (Note 1)	6.67%
2024F return on rate base before recovery	**90,558**

Note 1: For purposes of this calculation, we have used the 2024F average rate base and WACC before recovery as calculated in the 2024 Rate of RORB Application. To clarify, the above does not equal the ARBM AAF calculation. Appendix B provides an example of how the weighted average cost of capital under AAF is calculated.

The difference between the Company's 2024 regulated return on rate base calculation and the 2024 expected forecasted return on rate base using the above calculation is shown below:

(000's)	**2024F RB * WACC**	**2024F Regulated per NP**	**Variance**
Rate of return on rate base (%)	6.67%	6.85%	**0.18%**
Return on rate base (000's)	90,558	93,126	**2,568**
Return on rate base 2023 TY (000's)	82,275	82,275	**-**
Revenue requirement shortfall - before tax impact (000's)	8,283	10,851	**2,568**

When using the above calculation, we arrive at a rate of return on rate base of 6.67% which is 18 basis points lower than the regulated rate of return on rate base calculated by the Company of 6.85%. This difference reflects reconciling items between rate base and invested capital which are not contemplated in the above calculation.

As explained earlier in our report, the difference between WACC and Rate of RORB in the 2024 Rate of RORB Application is largely due to reconciling items between invested capital and rate base, primarily the RSA. The method (discussed above) calculates the RORB without considering the impact of any reconciling items between invested capital and rate base. In a GRA, the test year forecast rebalances the RSA and this is not a material issue. However, in non-test years the reconciling items could be significant as the RSA is functioning without a rebalancing effect.

Newfoundland Power's application of the Asset Rate Base Methodology vs Invested Capital Method

Given the differences between the 2005 and 2007 ARMB Reports, we have performed some additional procedures to investigate the variance.

We noted that the 2005 ARBM Report references the return on rate base as being simply calculated by applying the weighted average cost of capital to rate base. Given that this is different than what was reported in the 2007 ARBM Report and what is actually contemplated in the 2024 Rate of RORB Application, we asked the utility to explain why they were not following this approach.

Newfoundland Power noted the following:

> *"In Order No. P.U. 19 (2003), the Board found that the ARBM should be used to calculate Newfoundland Power's average rate base.*
>
> *Newfoundland Power's transition to the ARBM was therefore based on conforming the Company's calculation of average rate base to its average invested capital. This was predicated on the concept that all assets of a utility which are attributable to regulated activities (i.e. invested capital) should be included in its rate base.*
>
> *The most significant adjustment in the transition to the ARBM was including average deferred charges in the computation of average rate base, which was approved by the Board in Order No. P.U. 19 (2003). The Company subsequently implemented Board approved rate base changes that substantially conformed its calculation of rate base to its invested capital in its 2008 General Rate Application.*
>
> *The Board approved Newfoundland Power's proposal to complete the transition to the ARBM in the calculation of its 2008 average rate base in Order No. P.U. 32 (2007).*
>
> *The Board also approved the Company's calculation of its 2008 test year return on rate base, as well as its 2008 rate of return on rate base, in Order No. P.U. 32 (2007).*
>
> *The below table provides Newfoundland Power's calculation of its 2008 test year return on rate base and rate of return on rate base, as outlined and approved by the Board in Order No. P.U. 32 (2007).*

(000s)	**2008 TY**
Regulated return on common equity	32,700
Return on debt	34,680
Return on preferred equity	586
Return on rate base	**67,966**
Average rate base	**812,212**
Rate of return on rate base (%)	**8.37%**

The Company's 2008 test year return on rate base was calculated by adding its return on debt, return on common equity and return on preferred equity together as opposed to the formula of rate base x weighted average cost of capital ("WACC").

Newfoundland Power's 2008 test year rate of return on rate base was calculated by dividing the Company's 2008 test year return on rate base by its 2008 test year average rate base.

In approving the Company's 2008 return on rate base and rate of return on rate base, the Board provided that "as a result of the completion of the transition of the ARBM for calculating rate base [Newfoundland Power's] rate of return on rate base for ratemaking purposes will be the same as its weighted average cost of capital (WACC)."

In Newfoundland Power's view, Order No. P.U. 32 (2007) set the precedent in determining the Company's average rate base consistent with the ARBM and calculating its return on rate base and rate of return on rate base as outlined in the table above.

The general expectation with the ARBM is that Newfoundland Power's average rate base and average invested capital will be similar. In that scenario, the Company's rate of return on rate base and its WACC would also be similar, if not the same. However, differences in invested capital and rate base still exist related to construction work in progress, materials and supplies, and cash working capital amounts.

To illustrate, the below table provides the reconciliation between average rate base and invested capital for the 2022 and 2023 test years.

($millions)	**2022 TY**	**2023 TY**
Average rate base (A)	**1,239**	**1,288**
Construction work in progress (CWIP)	21	16
Materials and supplies	2	2
Cash working capital	(24)	(19)
Average invested capital (B)	**1,238**	**1,287**
Difference (B-A)	(1)	(1)

The above table shows that while 2022 and 2023 test year average rate base and invested capital were aligned, there were offsetting impacts in those years. Further, as outlined in the response to Request for Information PUB-NP-076 in the Company's 2025/2026 General Rate Application, Newfoundland Power removed Rate Stabilization Account balances from its proposed 2022 and 2023 test year forecasts in an effort to lessen the impact of the volatility of power supply cash flow effects that have occurred since the current wholesale rate was implemented on October 1, 2019. The adjustments served to better align the Company's average invested capital and its rate base for the 2022 and 2023 test years.

While similar adjustments have been made to Newfoundland Power's 2025 and 2026 test years, differences in average rate base and invested capital still remain for those years as detailed in the response to Request for Information PUB-NP-076.

In summary:

- *Since 2008, Newfoundland Power has calculated its average rate base consistent with the ARBM, and as required in Order No. P.U. 32 (2007).*
- *Since 2008, the Company has calculated its test year return on rate base by adding its return on debt, return on common equity and return on preferred equity together, consistent with the calculation outlined in Order No. P.U. 32 (2007).*
- *Since 2008, Newfoundland Power has calculated its test year rate of return on rate base by dividing the Company's test year return on rate base by its test year average rate base, consistent with the calculation outlined in Order No. P.U. 32 (2007).*
- *Larger variances in the Company's cash working capital requirements have occurred in recent years due to volatility in power supply costs since the current wholesale rate was implemented. Newfoundland Power has adjusted its 2025 and 2026 test year forecasts to lessen the impact of this volatility, consistent with the adjustments made to the 2022 and 2023 test years. Newfoundland Power is currently in discussions with Hydro on the implementation of a new wholesale rate. A new wholesale rate will significantly reduce the volatility in purchased power costs and, in the Company's view, likely reduce differences in its rate base and invested capital."*

We have reviewed the above response in detail, tracing its content to the relevant Board Orders and 2024 Rate of RORB Application sections and nothing has come to our attention that would suggest this explanation is unreasonable.

To further investigate the variance, we performed an additional comparison between the return on rate base under the ARBM and the Invested Capital Method and found the following difference:

ARBM applied by NP in Application			Invested Capital Method		
(in '000s)					
Rate Base (1)	$	1,360,058	Invested capital (2)	$	1,392,753
Rate of RORB		6.847%	WACC		6.667%
RORB derived:	$	93,126	RORB	$	92,855
Difference from rate of RORB Application				$	271

(1) After recovery in Application as presented in Appendix B
(2) Before recovery in Application as presented in Appendix B

We asked the Company to reconcile the above difference between the ARBM and the Invested Capital Method as the Invested Capital was calculated before recovery and needed conversion to after recovery as proposed in the Application. They responded with the following:

"Newfoundland Power's average capital structure shown in Appendix B is based on the 2024 existing forecast. As a result, it does not reflect the increase in average common equity related to the 2024 revenue shortfall net of income taxes (at an 8.50% return on equity) of $8,845,000 and the associated financing cost effects.

The below table provides Appendix B, incorporating this impact into the Company's 2024 forecast capital structure. This allows the approach outlined in the question to provide a result consistent with the return on rate base amount shown in Appendix B." [Appendix B to this response has been included on the next page].

Average Capitalization ($000s)	Existing	Financing impacts of 8.50% Recovery	2024PF	
Debt	790,532	(3,840)	786,692	A
Common Equity	602,221	4,459	606,680	B
	1,392,753	619	1,393,372	
Average Capital Structure				
Debt	56.76%	-0.30%	56.46%	C
Common Equity	43.24%	0.30%	43.54%	D
	100.00%	0.00%	100.00%	
Cost of Capital				
Debt	5.27%	0.01%	5.28%	E
Common Equity	8.50%	0.00%	8.50%	F
Weighted Average Cost of Capital				
Debt	2.99%	-0.01%	2.98%	G = C * E
Common Equity	3.68%	0.02%	3.70%	H = D * F
	6.6700%	0.01%	6.6800%	
Return on Rate Base ($000s)				
Return on Debt	41,628	(91)	41,537	I = A * E
Return on Common Equity	51,498	70	51,568	J = B * F
	93,126	(21)	93,105	
Average Rate Base ($000s)	1,360,058		1,360,058	
Rate of Return on Rate Base	6.85%		6.85%	

There is a difference of $21,000 when comparing the result of the RORB under each method, after recovery, as presented in following table:

ARBM applied by NP in Application		**Invested Capital Method**	
(in '000s)			
Rate Base (1)	1,360,058	Invested capital (1)	1,393,372
Rate of RORB	6.847%	WACC	6.682%
RORB derived:	$ 93,126	RORB	$ 93,105
Difference from Rate of RORB Application			$ 21

(1) After recovery in Application.

We have reviewed the above response in detail and nothing has come to our attention that would suggest this explanation is unreasonable.

To provide a more direct conclusion on the matter, we asked the Company to confirm that the return on rate base approved in each test year since the 2008 GRA was equal to the approved test year weighted average cost of capital times the approved average rate base. The Company's response was as follows:

> *"It is not confirmed that Newfoundland Power's return on rate base for all test years since 2008 would equal its average rate base multiplied by its WACC. However, the Company can confirm that differences in average rate base and average invested capital were relatively minor in those test years, resulting in Newfoundland Power's rate of return on rate base and WACC being equal. Accordingly, there would be relatively small differences in the Company's calculation of its test year return on rate base approved by the Board and an amount calculated by multiplying its average rate base by its WACC in the test years over the 2008 to 2023 timeframe."*

We have reviewed the above response in detail and have concluded the following:

- **The 2024 Rate of RORB Application as filed by Newfoundland Power is prepared in accordance with the ARBM. The Company continues to have reconciling items between asset rate base and invested capital. The impact of those reconciling items can be volatile and there are periods in which the impact may be minimal and other periods where the impact is more significant. The impact in the 2024 Rate of RORB is more significant than it has been in other recent years.**

- **As a result of applying ARBM the Company has calculated a rate of return on rate base (%) of 6.847% and a return on rate base of approximately $93,126,000. We have found no errors, omissions or exceptions in the Company's calculation of this return. However, if the invested capital method was applied the rate of return on rate base (%) would equal WACC at 6.682% and the return on rate base would be approximately $93,105,000.**

Appendix A – Documents referenced

The following table provides a summary of the external documents referenced during our review:

#	Source
1.	Newfoundland and Labrador – Public Utilities Act - RSNL1990 CHAPTER P-47 - PUBLIC UTILITIES ACT (assembly.nl.ca)
2.	P.U. 20 (2023) — July 21, 2023 - P.U. 20(2023).PDF (pub.nl.ca)
3.	P.U. 3 (2022) Amended No 2 – January 5, 2022 – P.U. 03(2022) - Amended No. 2.PDF (pub.nl.ca)
4.	P.U. 32 (2007) – December 19, 2007 - PU 32 (2007): Complete (pub.nl.ca)
5.	P.U. 19 (2003) – June 20, 2003 - P.U. 19 (2003): Summary of Decision and Order (pub.nl.ca)
6.	P.U.12 (2010) – April 20, 2010 - PU 12 (2010) (pub.nl.ca)
7.	P.U. 25 (2011) – December 13, 2011 - PU 25 (2011) (pub.nl.ca)
8.	P.U.13 (2013) – April 17, 2013 - pu13-2013.pdf (pub.nl.ca)
9.	P.U. 18 (2016) – June 8, 2016 - PU18-2016.pdf (pub.nl.ca)
10.	P.U. 2 (2019) – January 24, 2019 - PU2-2019.PDF (pub.nl.ca)
11.	Newfoundland Power's 2006 Capital Budget Application – A report on the Asset Rate Base Methodology, June 2005 - NP 2006 Cap Budget Appliaction, Complete Document (pub.nl.ca)
12.	Newfoundland Power's 2008 General Rate Application – A Report on the Implementation of the Asset Rate Base Method, June 2007 - PUB: NF Power General Rate Hearing
13.	Newfoundland Power's 2008 General Rate Application – Volume I - PUB: NF Power General Rate Hearing

Appendix B – 2011 Rate of Return on Rate Base calculated under the AAF

Rate of Return on Rate Base (WACC)
Based on Revised Forecast Cost of Common Equity for 2011

	%	Cost	Weighted Cost
Debt	54.27%[1]	7.64%[1]	4.15%
Preference Shares	1.04%[1]	6.23%[1]	0.06%
Common Equity	44.69%[1]	8.38%[2]	3.75%
2011 Rate of Return on Rate Base			**7.96%**

[1] Based on 2010 Test Year, approved by Order No. P.U. 46 (2009).

[2] 2011 Cost of Common Equity adjusted for the calculation of the risk free rate.

Appendix C – Changes in revenue requirement

During the course of our review, we also considered the variances between 2023TY and 2024F before recovery.

Statement of income ($000s)	**2023TY**	**2024F**	**Variance**
Revenue	703,826	777,237	73,411
Purchased power expense	459,924	522,821	62,897
Contribution	243,902	254,416	10,514
			-
Other revenue	6,473	9,789	3,316
			-
Other expenses:			-
Operating expenses	70,725	78,775	8,050
Employee future benefit costs	2,771	3,010	239
Deferred cost recoveries and amortizations	(816)	(240)	576
Depreciation	74,458	79,557	5,099
Finance charges	33,091	41,701	8,610
	180,229	202,803	22,574
Income before income taxes	70,146	61,402	(8,744)
			-
Income taxes	20,944	18,749	(2,195)
Earnings applicable to common shares	49,202	42,653	(6,549)

The Company 2024 Rate of RORB Application includes 2024 forecast net income in the calculation of shareholders' equity used to derive the Company's average capital structure.

We noted that reported operating costs for the 2023 test year were approximately $70,725,000 as compared to 2024 forecast operating costs of $78,775,000. We investigated the variance of $8,050,000, broken down as follows:

000's	2023TY (1)	2024F (2)	Variance (3)	Ref. (3)
Regular and standby	33,148	36,099	2,951	a
Temporary	2,108	691	(1,417)	a
Overtime	3,537	3,639	102	
Total labour	**38,793**	**40,429**	**1,636**	
Fleet repairs & maintenance	1,730	2,142	412	b
Operating materials	1,287	1,290	3	
Inter-company charges	28	28	-	
Plants, subs, system oper & bldgs	3,492	3,823	331	c
Travel	891	1,179	288	d
Tools and clothing allowance	1,265	1,411	146	
Miscellaneous	1,595	1,640	45	
Taxes and assessments	1,181	1,428	247	
Uncollectible bills	2,208	2,186	(22)	
Insurances	2,345	2,621	276	
Severance & other employee costs	133	160	27	
Education, training, employee fees	354	512	158	
Trustee and directors' fees	712	760	48	
Other company fees	2,574	5,131	2,557	e
Stationary & copying	260	247	(13)	
Equipment rental/maintenance	897	690	(207)	
Communications	1,588	1,748	160	
Postage and freight	1,202	1,209	7	
Advertising	534	609	75	
Vegetation management	2,441	3,323	882	f
Computing equipment & software	3,446	4,272	826	g
Total other	**30,163**	**36,409**	**6,246**	
Gross operating costs	**68,956**	**76,838**	**7,882**	
Amortization of CDM costs	4,581	4,903	322	
Transfers to GEC	(2,812)	(2,966)	(154)	
Regulated operating costs	**70,725**	**78,775**	**8,050**	

(1) The 2023 test year operating expense amount of $70,725,000 was approved in Order No. P.U.3 (2022) – Amended No. 2.

(2) The 2024 forecast operating expense amount of $78,775,000 is included in the Company's 2024 forecasted statement of income in Appendix D (pg. 1) of the 2024 Rate of RORB Application.

(3) The Company provided the following explanations for significant variances between the 2023 test year and 2024 forecast operating expenses:

a) The regular and standby, including temporary, increase of $1,534,000 primarily reflects annual labour inflation of 3.80% and two additional operating days in 2024. Increases are partially offset by decreased labour costs associated with the enhancement of operation technologies;

b) The fleet repairs & maintenance increase of $412,000 is due to higher fuel prices and increased maintenance costs, including inflationary increases;

c) The plants, subs, system oper & bldgs increase of $331,000 is primarily due to higher costs for building maintenance, snow clearing services and generation taxes;

d) The travel increase of $288,000 reflects inflationary increases and a return to normal levels of Company travel due to the lifting of public health restrictions established during the COVID-19 pandemic;

e) The other company fees increase of $2,557,000 reflects higher consultant costs associated with: (i) regulatory proceedings anticipated in 2024, including the Company's 2025/2026 General Rate Application; (ii) upcoming changes in accounting standards; and, (iii) information technology, including cybersecurity;

f) The vegetation management increase of $882,000 reflects additional distribution and transmission vegetation management activity and increases in inflation since the last general rate application. The 2024 forecast amount includes an inflationary increase of 1.95% over the revised 2023 forecast of $3,259,000; and,

g) The computing equipment & software increase of $826,000 reflects additional licensing and support costs for third-party hardware and software solutions, including cybersecurity.

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