

1 **Q. (Reference PUB-NP-108)**

- 2 a) Part a of the question asks Newfoundland Power to “*quantify the additional*
 3 *amount in annual revenues that result from Newfoundland Power Owning the*
 4 *transformers at the Memorial University Substation rather than the University.*”
 5 Newfoundland Power responds that the additional revenue is about \$100,000.
 6 Part b of the question asks “*If Memorial University paid a contribution equal to*
 7 *the cost of transformation at the substation, would the demand charge paid by the*
 8 *University be reduced by the amounts provided in response to subsection a)?*” The
 9 response does not answer the question. Please respond to part b of the question
 10 that asks if the University paid a contribution equal to the cost of transformation
 11 at the substation, would the demand charge paid by the University be reduced
 12 by \$100,000?
- 13 b) It is stated (part c) “*This relationship between the cost to serve Memorial*
 14 *University and the rates paid by Memorial University does alleviate concerns on*
 15 *cross subsidization that may arise as a result of Newfoundland Power funding the*
 16 *investment in transformation at the MUN Substation.*” Please provide support for
 17 this statement showing how the demand charge premium for Memorial
 18 University compares to the lifecycle cost of transformers that serve the
 19 University. Since Memorial University receives one bill for power supplied at
 20 both Long Pond and Memorial Substations, please consider the costs of
 21 transformation at both substations.
- 22 c) Please provide a comparison of the demand charge discount for the Rate 2.4
 23 customer served from the BIG Substation to the lifecycle cost of transformer(s)
 24 that serve this customer. Assume Newfoundland Power owns the transformer
 25 that serves the Rate 2.4 customer served via the BIG Substation.
- 26 d) Does the demand charge discount apply only to customers whose transformers
 27 are owned by the customer and that serve only that customer?
- 28 e) Do rates designed to collect the revenue requirement determined in the cost of
 29 service study result in cost-based rates?

- 30
- 31 A. a) Part b) of the response to Request for Information PUB-NP-108 states that if
 32 Memorial University were to own the 66 kV – 12.5 kV transformer providing service
 33 to Memorial University, its demand charges from Newfoundland Power would be
 34 reduced by \$100,000.

35
 36 The response was given in the context of Newfoundland Power’s Schedule of *Rates,*
 37 *Rules and Regulations* which requires that a customer own its transformer in order to
 38 receive a demand credit.¹ The *Schedule of Rates, Rules and Regulations* does not
 39 permit customers to receive a demand credit by making a contribution versus owning
 40 a transformer.

¹ See Newfoundland Power’s *Schedule of Rates, Rules & Regulations, Effective July 1, 2023*, section 9(k).

1 b) Newfoundland Power is in the process of replacing the MUN-T2 transformer at the
2 Memorial (“MUN”) Substation.² Capital expenditures associated with power
3 transformation at the Long Pond (“LPD”) Substation were funded on behalf of the
4 customer as it was considered to be redundant.³ As a result, it is not appropriate to
5 consider the existing LPD Substation as part the transformer capacity necessary to
6 supply Memorial University.
7

8 The lifecycle cost of the MUN-T2 transformer was calculated to be \$0.60/kVA. A
9 demand credit on this basis would amount to \$1.00/kVA.⁴ This compares to the
10 current demand credit of \$0.90/kVA.
11

12 c) Newfoundland Power’s standard practice is to provide transformation to customers up
13 to 500 kVA where the required service voltage is one of the Company’s standard
14 service voltages and installation is in accordance with Newfoundland Power’s
15 standards. In other circumstances, the Company may provide the transformation.⁵ To
16 accomplish this, Newfoundland Power maintains an inventory of 12.5 kV padmount
17 transformers above 500 kVA to serve General Service customers.⁶
18

19 The lifecycle cost of the Company’s padmount transformers above 500 kVA ranged
20 from \$0.30 per kVA to \$0.78 per kVA with an average of \$0.54 kVA. This compares
21 to the demand credit available to customers with their own 12.5 kV transformers of
22 \$0.40. Newfoundland Power’s demand credit of \$0.40 for customers owning their
23 own 12.5 kV transformers is comparable to other utilities.⁷
24

25 d) As per the Company’s *Schedule of Rates, Rules and Regulations* section 9(k), the
26 monthly demand charge is reduced for customers that own their own transformers.
27 Newfoundland Power customers are not permitted to supply other customers with
28 their own transformation.
29

30 e) Yes, Newfoundland Power’s customer rates are designed to collect the costs
31 necessary to serve its customer rate classes. The Company’s cost of service study
32 provides information detailing the revenues collected from customers in each rate
33 class as well as the costs allocated to each customer rate class. Maintaining
34 revenue-to-cost ratios for each customer rate class within a range of 90% to 110% has
35 been an accepted approach to achieving fairness in rate design by avoiding undue

² In Order No. P.U. 14 (2023), the Board approved capital expenditures of approximately \$1.6 million associated with the replacement of the failed MUN-T2 transformer.

³ See Order No. P.U. 5 (2019).

⁴ This is based on the \$1.6 million capital cost of the MUN-T2 transformer. On this basis, the demand credit for customers served by transmission voltages includes the cost of the customer providing transformation at transmission voltages as well as transformation at distribution voltages. $\$0.40/\text{kVA} + \$0.60/\text{kVA} = \$1.00/\text{kVA}$.
⁵ See Newfoundland Power’s *Schedule of Rates, Rules and Regulations, Effective July 1, 2023, section 5(j)*.

⁶ This includes padmount transformers with capacity ranging from 750 kVA to 2,500 kVA.

⁷ For example, the demand credit applicable to BC Hydro customers is \$0.25/kW. The demand credit applicable to FortisBC customers is \$0.39/kW. The demand credit applicable to Nova Scotia Power is \$0.32/kW. The demand credit for Hydro Quebec is \$0.68/kW. The demand credit for Hydro One is \$0.60/kW.

1 cross-subsidization among the various rate classes.⁸ All of Newfoundland Power's
2 customer rate classes are within this threshold.⁹

⁸ This is consistent with the views of the Board as expressed in Order No. P.U. 7 (1996-1997), which states: "*The Board agrees with the philosophy that it is not necessary to achieve a 100% revenue to cost ratio for all classes and takes no exception to a variance of up to 10%*".

⁹ See Newfoundland Power's *2025/2026 General Rate Application, Volume 1 – Application and Company Evidence, Section 5: Customer Rates*, Page 5-7, Table 5-5.