

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF THE PUBLIC UTILITIES ACT

- and -



IN THE MATTER OF AN APPLICATION by **NOVA SCOTIA POWER INCORPORATED**
for approval of Capital Work Order CI#47124 for its Advanced Metering Infrastructure
Project in the amount of \$133,228,952

BEFORE:

Peter W. Gurnham, Q.C., Chair
Roberta J. Clarke, Q.C., Member
Steven M. Murphy, MBA, P.Eng., Member

COUNSEL:

NOVA SCOTIA POWER INCORPORATED
Brian Curry, LL.B.

AFFORDABLE ENERGY COALITION
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**MUNICIPAL ELECTRIC UTILITIES OF NOVA SCOTIA
COOPERATIVE**
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NOVA SCOTIA DEPARTMENT OF ENERGY
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Melissa MacAdam, LL.B.

**THE PLANETARY ASSOCIATION FOR
CLEAN ENERGY, INC.**

Dr. Andrew Michrowski

BOARD COUNSEL: S. Bruce Outhouse, Q.C.

COMPLIANCE FILING: August 31 and September 20, 2018

SUBMISSIONS: October 29 and November 13, 2018

DECISION DATE: December 6, 2018

DECISION: NS Power is directed to use, in communication with customers, monthly fees of \$4 for customers currently on a bi-monthly meter reading schedule and \$22 for customers currently on a monthly meter reading schedule, respectively, as approximate values. Charges will commence following the next General Rate Application.

1.0 INTRODUCTION

[1] In its Decision dated June 11, 2018 [2018 NSUARB 120] the Nova Scotia Utility and Review Board (Board) approved Nova Scotia Power Incorporated's (NS Power's) Application for approval of Capital Work Order CI#47124 for its Advanced Metering Infrastructure (AMI) Project in the amount of \$133,228,952.

[2] In that Decision, NS Power was directed to file a Compliance Filing on or before August 31, 2018, to provide a detailed plan as to how it will inform customers of the process to opt-out of installation of the meters in addition to determining the estimated charge for opting-out.

[3] The Compliance Filing was filed on August 31, 2018, and then revised and refiled on September 20, 2018. The Board provided an opportunity for interested parties to ask Information Requests (IRs) and to provide comments. IRs were filed by the Consumer Advocate (CA), Small Business Advocate (SBA), the Affordable Energy Coalition, Board Counsel consultant Synapse Energy Economics, Inc. (Synapse), and by Board staff. Comments were received from the CA, the SBA and Synapse on October 29, 2018, and NS Power filed Reply Evidence on November 13, 2018.

2.0 POSITIONS OF THE PARTIES

[4] In its Compliance Filing, NS Power proposed a monthly opt-out charge of \$12.21 for customers currently on a bi-monthly meter read schedule and \$24.42 for customers currently on a monthly read schedule.

[5] NS Power outlined the principles that it applied in determining the suggested opt-out charge:

- **Opt-out charge based simply on cost recovery** - NS Power's estimated cost of opting out of AMI represents the forecast cost to serve customers who choose the non-

standard meter option. Please refer to Section 3 for a detailed breakdown of estimated opt-out costs.

- **Minimize opt-out through effective communication** - NS Power's objective is to minimize the number of customers who elect not to take service using AMI through clear and effective communication of the benefits for customers, individually and collectively, of the AMI infrastructure. The Company will undertake this communication in advance of and during the project roll-out, as well as through subsequent follow-up with customers electing to opt-out of AMI service. Please refer to Section 4 for NS Power's draft communications plan.
- **Maintaining Existing Level of Service** - NS Power will maintain existing levels of service for customers choosing to opt-out of AMI service. Customers whose meters are currently read bi-monthly will continue to be read bi-monthly. Customers whose meters are read monthly will continue to be read monthly. To do otherwise would force these customers to accept increased estimated bills, thereby increasing the risk of large balances being owed to the Company or to the customers by the Company and providing less timely information as to electricity consumption, compromising customers' service expectations.
- **Opt-out charges to be refined with experience** - NS Power's proposed opt-out charge is based on forecast assumptions that will be refined with operational experience after AMI has been implemented, and will be subject to change, which the Company will bring forward in a subsequent application or process. Because NS Power has estimated its opt-out charge prior to deployment of AMI, learnings through operational experience, as well as experience with the opt-out cost drivers, will, over time, lead to a more refined cost recovery methodology. In all cases, NS Power will provide full transparency on cost recovery.
- **Customers may opt-in at any time** - Customers who opt-out may, at any time, opt-in and adopt standard meter service at no cost and eliminate costs associated with non-standard meter service.

[Exhibit N-32, pp. 5-6]

[6] The SBA noted the following:

- Estimated meter reading travel times could be reduced by grouping opt-out customers in similar geographic regions into appropriate billing cycles rather than using estimated travel times associated with independent service orders;
- NS Power's proposed opt-out charge is nearly 10% of the average residential customer monthly bill and 8.6% of the small general customer monthly bill;

- NS Power did not fully explore alternative meter reading approaches as directed in the Board's Decision.

[7] The SBA requested the Board consider alternatives for reduced meter readings and associated opt-out charges. He also stated that customers should be advised of the assumptions used to estimate the opt-out charge and that the actual opt-out charge will be determined after AMI meters are installed. That determination will be dependent upon the number of opt-out customers and their locations.

[8] The CA also noted that NS Power made no change to the meter reading frequency for opt-out customers and did not seem to thoroughly analyze the means by which costs could be minimized. The CA's consultant undertook detailed modelling of the overall meter reading components and concluded that there is a substantial risk that NS Power "overstated the costs of opting-out by a wide margin". For example, he noted that NS Power's model imposes several shortcomings related to staffing, and it also assumes that opt-out meter reading would be no more routine than service calls with unpredictable and varying locations. The analysis undertaken by the CA's consultant suggests that the incremental cost of opt-out for six bi-monthly readings per year would range from \$2.36 to \$5.36 per month.

[9] In its submission, Synapse, the Board Counsel consultant, stated that the costs associated with opting-out are uncertain and raised a concern that NS Power would be over-recovering metering costs for an indefinite amount of time (until the next rate case), since metering costs are already embedded in current rates.

[10] In its Reply Submission, NS Power maintained its position of continuing with the existing levels of meter reading service for customers who opt-out of AMI meter

reading. NS Power stated that reducing the frequency of meter reading for bi-monthly read customers would require customers to accept increased estimated bills and increased risk of large balances being created as a result of differences between estimates and actual results.

3.0 AMI OPT-OUT CHARGE

[11] In its Compliance Filing, NS Power proposed a monthly opt-out charge of \$12.21 for customers currently on a bi-monthly read schedule (i.e., \$24.42 per bi-monthly bill) and \$24.42 for customers currently on a monthly read schedule. Intervenors suggested that NS Power's input assumptions in determining these charges may be overstated. The Board agrees.

[12] In its IR-12, Synapse asked if NS Power received feedback or conducted outreach in determining that the current meter reading frequency should be maintained for opt-out customers. The response stated that NS Power consulted with three other Canadian utilities and learned that two of the three utilities maintained their established meter reading frequency. The third utility was directed by its regulator to reduce the meter reading frequency to once per year.

[13] In the Board's view, a semi-annual meter reading frequency should be sufficient for opt-out customers in Nova Scotia. This would align with the review period for customers served under the equal billing plan in Regulation 5.3.

[14] According to NS Power's Budget Plan report in Matter M08766, as of December 31, 2017, there were 86,396 customers enrolled in the equal billing plan. This is approximately 17% of the total customer base. Under that program, customer monthly bills are based on the annual consumption from the previous year. On May 10, 2017, the

Board approved amendments to Regulation 5.3, which included a July reset date for the equal billing program. That amendment allows NS Power to set the monthly equal billing payment twice a year, in January and July, based on the preceding 12-month billing period. The reason for this change was to assist in reducing large credits and debits from accumulating on customer accounts.

[15] The Budget Plan report also noted that although NS Power has addressed certain complaints regarding the equal billing program, there were no related formal complaints escalated to the Dispute Resolution Officer or to the Board in 2017.

[16] Further, in Attachment 1 of NS Power's response to UARB IR-3 in this Matter, NS Power showed that by reducing the meter reading frequency to twice per year for the estimated 2% of opt-out customers, the monthly charge would be \$5.49 for current bi-monthly read customers, and \$32.94 for customers currently read on a monthly schedule. However, as noted above, the Board accepts intervenor submissions that NS Power's input assumptions may be overstated.

[17] The Board does not accept NS Power's service order model used to develop its opt-out charge. Since it appears feasible to develop meter reading routes for opt-out customers, the times allocated for meter reading and travel should be more closely aligned with that type of activity, rather than with a service order model. Therefore, the Board finds that adjustments are warranted in NS Power's time allocation to read meters and the associated travel times. Those adjustments would result in a reduced meter reading staff complement and a reduced workload for the Meter Reader Supervisor and Meter Coordinator.

[18] In addition, as evidenced in Attachment 1 to UARB IR-3, a reduced complement also reduces the associated depreciation and carrying costs. This could be further reduced on the assumption that the Meter Reader Supervisor function is largely an office activity, and therefore may not require a dedicated vehicle, but could effectively complete the position responsibilities by using a pool vehicle when needed.

[19] A further concern of the Board is the amount of time that NS Power has categorized as “safety training/Admin”. A total of 240 hours, or 30 days per year, has been allocated to this activity as non-productive hours for each meter reader. Without explanation by NS Power, this appears excessive.

[20] In reviewing NS Power’s IR responses, the Board notes arithmetic errors in Attachment 2 of the response to CA IR-3. The illustration provided on page 5 of 6 incorrectly determines an average time per meter read (including travel) of 1.7 minutes, but the correct result should be 0.7 minutes. Similarly, in the opt-out example on page 6 of 6, the average time per meter read (including travel) is shown as 19.5 minutes, but should be 18.5 minutes. If that illustration remained consistent with a 2% opt-out rate, then it would be based on five customers, not three, which would further reduce the time to 11.3 minutes.

3.1 Findings

[21] Having considered the exhibits and submissions in this matter, the Board has made the following adjustments to the input assumptions proposed by NS Power for the “6-Month Read” spreadsheet in Attachment 1 of the response to UARB IR-3:

- Read Meter Time -- reduced from 5 minutes to 2 minutes
- Travel Time Urban -- reduced from 15 minutes to 10 minutes
- Travel Time Rural -- reduced from 25 minutes to 20 minutes
- Meter Reader Urban FTE -- reduced from 3 to 2

- Meter Reader Rural FTE -- reduced from 4 to 3
- Meter Reader Supervisor -- reduced from 1 FTE to 0.5 FTE
- Meter Coordinator -- reduced from 1 FTE to 0.5 FTE
- Depreciation, Carrying Costs, and Tax -- reduced to the amount shown for a "12-Month Read" with 5 vehicles instead of 8 vehicles.

[22] With these adjustments, the Board calculates the revised amount of the potential opt-out charge at \$3.62 per month for customers currently on a bi-monthly reading schedule and \$21.71 for customers currently on a monthly reading schedule (assuming a 2% opt-out rate). Based on these results, NS Power is directed to use monthly fees of \$4 and \$22, respectively, as approximate values in its communications to customers regarding the opt-out option, with the understanding that those amounts are rough estimates which remain to be verified during the next general rate application.

4.0 COMMENCEMENT OF THE CHARGE

[23] The Board, in its Decision dated June 11, 2018, stated:

...there is a cost to the continued use of those [existing non-AMI] meters, assuming meter reading costs for non-AMI meters are **excluded in the next rate case**.

...The Board urges NSPI to consider if there are means by which the costs might be minimized, e.g., by reducing the frequency of readings. (Emphasis added)

[2018 NSUAR 120, p. 54]

[24] The Board found that customers should know how much opting-out is going to cost as that may well be a factor in the decision whether to retain a non-standard meter. Accordingly, NS Power was directed to submit the current Compliance Filing to identify the cost of opting-out of AMI technology in order to assist NS Power's customers in making that decision.

[25] The Board was signaling, in the above noted quote, that cost recovery would not occur until those costs were excluded in the next rate case. NS Power

proposes charging the opt-out fee upon implementation of the AMI meters. However, NS Power does not propose any rate reduction to recognize the savings being attributed to the AMI Project. In Responses to IRs, NS Power stated that the capital and operating costs and savings enabled by AMI investment would be reflected in a future revenue requirement and recovered in future rates, presumably as a result of a future general rate proceeding.

[26] The timing of the implementation of the opt-out charge was the principal focus of the submission by Board Counsel consultant, Synapse, dated October 29, 2018. Synapse's recommendation was that since meter reading costs are already embedded in rates, NS Power should not be permitted to implement an opt-out charge until the next rate case as that would lead to an over-recovery of costs. Synapse expanded on this argument as follows:

Our primary concern with the proposed opt-out charge is that once the opt-out charge is instituted, NSPI would be over-recovering metering costs until the next rate case. This is because metering costs are already embedded in NSPI's current rates. NSPI has not committed to submit a rate filing by a specific date, so the over-recovery would continue for an indefinite amount of time.

...

The costs associated with the opt-out charge should not be recovered until the next rate case, as doing so would result in single-issue ratemaking. Single-issue ratemaking is problematic because it examines only a subset of cost categories and ignores changes in other cost centers. Only in a general rate case, where both increasing and decreasing costs are considered, should a new charge be implemented.

...

... Until NSPI files for a rate case, meter reading costs will be recovered from opt-out customers twice: once in base rates, and again through the opt-out charge. NSPI's opt-out filing estimates that the NSPI would recover approximately \$1.5 million annually through the opt-out charge, assuming an opt-out rate of 2 percent. Thus, if implemented prior to the next rate case, NSPI would likely be over-recovering by \$1.5 million. The actual amount of over-recovery could possibly be more, given that the opt-out charge would be implemented solely based on cost estimates, rather than actual cost data.

[Synapse Comments, October 29, 2018, pp. 2-3]

[27] The Board notes that the potential amount of over-recovery could be significantly greater than the \$1.5 million suggested in the above Synapse submission. In its Cost of Service Study filed as part of the General Rate Application for the 2014 test year, NS Power included meter reading costs of \$10.853 million, which is also shown in the response to Synapse IR-2, Attachment 1. Those costs are currently embedded in rates and are being collected from ratepayers.

[28] In its Reply Submission, dated November 13, 2018, NS Power argued that opt-out service will become a non-standard service and there is no need to tie implementation of the opt-out charge to an update in utility revenue requirement. NS Power stated:

Given the Board's approval of the AMI Application, meter reading service across the AMI system will become the standard in Nova Scotia. NS Power's AMI Application has been determined to be in the public interest by the Board. Consistent with this, the non-standard opt-out service charge will not affect or be affected by future GRAs. It will be treated as a "pass-through" to opt-out customers, where the revenue associated with the service will offset the forecast cost of delivering the service and will not affect general customer rates. Therefore, there is no need to tie implementation of the AMI opt-out service charge to an update to utility revenue requirement and/or electricity rates, as conducted during a GRA. The non-standard service (i.e. opt out service) is based on the forecast incremental cost to service opt-out customers. As such, there will be no "over-recovery" associated with the non-standard charge.

[Exhibit N-38, p. 14]

[29] NS Power stated the Application is not the result of an increase to NS Power's cost to provide standard service and is not proposing any change to its standard approved rates and, therefore, should not be considered single issue ratemaking.

4.1 Findings

[30] It was not the Board's intent when it issued the June 11, 2018 Decision – nor is it the Board's intent now – that the opt-out charge should be in rates prior to the next general rate case. As noted in the June Decision, the Board was concerned that

customers be aware of the opt-out charge prior to being called upon to make the decision to opt-out:

[195] The Board finds that any charge for opting-out should be known before a customer is required to make the decision to have a smart meter installed or not. NSPI is directed in a Compliance Filing to set out the charge and the frequency, and any other relevant terms, no later than August 31, 2018. If NSPI is unable to do so, the Board will establish a process to determine the charge.

[2018 NSUARB 120, p. 54]

[31] NS Power, in its Reply Submission, cited a text by James Lazar, *Electricity Regulation In the US: A Guide*. It is not apparent to the Board from its review of the portion quoted that it supports the proposition for which NS Power cites it.

[32] The Board agrees with the opinion provided by Synapse that, until NS Power files for the next rate case, meter reading costs will be recovered from opt-out customers twice: once in base rates and again through the opt-out charge. In the Board's view, that is inappropriate. These customers are already paying for the meter reading service.

[33] The Board agrees with NS Power's position that the capital and operating costs and savings enabled by AMI should be reflected in a future revenue requirement.

[34] However, NS Power cannot have it both ways: not giving customers the benefit of the savings until the next general rate application, yet collecting the opt-out cost in advance of the next general rate application.

[35] NS Power's communication plan is to reflect the estimated opt-out charge calculated elsewhere in this Decision so that customers know the expected opt-out charge before being required to make a decision to have an AMI meter installed or not. The Board, of course, recognizes that in a future general rate application NS Power may apply to recalculate that charge or amend its terms and conditions. However, in the

meantime, that will be the estimated opt-out charge for purposes of communicating with ratepayers.

5.0 CUSTOMER ENGAGEMENT PLAN AND COMMUNICATIONS PLAN

[36] In its Application, NS Power proposed a Customer Engagement Plan (CE Plan) to inform customers about AMI. The CE Plan it developed was provided in response to CA-IR 94 as Attachment 1 and was designed to “inform and educate customers”, and to “prepare [them] for installation and to take advantage of immediate AMI benefits”.

[37] According to the Application, the CE Plan had three phases, with a timeline that begins approximately 30 days before the rollout of the AMI meters, and continues after the rollout is complete, using a variety of means to communicate with customers.

[38] In its June 11, 2018 Decision approving the capital work order at Paragraph [217], in connection with health and safety standards, the Board said:

The Board directs NSPI to ensure that all available information regarding the standards and requirements be made available to its customers as part of the Customer Engagement Plan; further, NSPI is directed to ensure that its customer service staff are familiar with the information and will make it available to any customer who wishes to have it at any time, whether prior to “opting-out”, or otherwise. The Board considers this necessary to ensure that customers can make fully informed decisions.

[2018 NSUARB 120, p. 59]

[39] As noted earlier in this Decision, the Board considered that customers should also know the cost of opting-out in order to make such fully informed decisions. In its Compliance Filing, NS Power included a draft Communications Plan, which it said would be refined as rollout proceeds. The Communications Plan identifies the audience, the means and frequency of communication, and content of information to customers.

[40] The Board has reviewed the draft Communications Plan and finds it acceptable; however, it directs NS Power to ensure that any refinements to that Plan be

consistent with ensuring that customers are appropriately informed about the proposed installation and options, as well as the anticipated costs as identified in this Decision.

6.0 DIRECTIVES

[41] The Board provides NS Power the following directives:

- 1) In order to more fully pursue initiatives which could reduce opt-out costs, NS Power is directed to explore the option of providing opt-out meter reading services via external contractor resources. This analysis should include an economic comparison against provision via in-house resources.
- 2) To aid in transparently establishing any future opt-out charge, NS Power is directed to track and annually file its costs associated with opt-out services.

7.0 SUMMARY

[42] NS Power is directed to use monthly fees of \$4 for customers currently on a bi-monthly reading schedule and \$22 for customers currently on a monthly reading schedule, respectively, as the approximate values in its communication to customers regarding the opt-out option, with the understanding that those numbers are rough estimates which remain to be verified during the next General Rate Application.

[43] The Board finds that if NS Power was permitted to collect the charge before NS Power files for the next rate case, meter reading costs will be recovered from opt-out customers twice: once in base rates and again through the opt-out charge. In the Board's view, that is inappropriate. These customers are already paying for the meter reading service.

[44] The Board has reviewed the draft Communications Plan and finds it acceptable; however, it directs NS Power to ensure that any refinements to that Plan be

consistent with ensuring that customers are appropriately informed about the proposed installation and options, as well as the anticipated costs as identified in this Decision.

[45] An Order will issue accordingly.

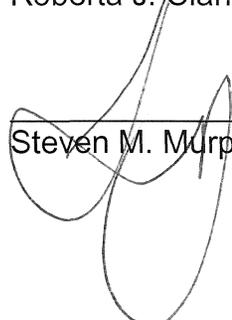
DATED at Halifax, Nova Scotia, this 6th day of December, 2018.



Peter W. Gurnham



Roberta J. Clarke



Steven M. Murphy