

NOVA SCOTIA ENERGY BOARD

IN THE MATTER OF: THE PUBLIC UTILITIES ACT

- and -

IN THE MATTER OF: AN INQUIRY about the impact of the cyber incident on **NOVA SCOTIA POWER INCORPORATED's** collection and retention of customer information, customer service and communications, billing processes and regulatory matters

INFORMATION REQUESTS

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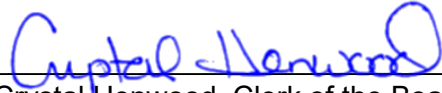
From: **Nova Scotia Energy Board**
 Board Staff

Responses Due: **Wednesday, May 6, 2026**

Copies: 1 electronic copy (PDF searchable)

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Crystal Henwood, Clerk of the Board

Request IR-1:

In response to the Board's IR-13 and IR-14 (Exhibit N-4), the utility provided the following response:

(d) ...When NS Power lost the ability to communicate with that network through the cyber incident, the estimation logic reverted to a contingency CIS subroutine which uses seasonal logic. When a bill read is missing, CIS estimates a reading using the average usage per day at the specific property on bills in the last 12 months that are considered in the same season.

(e) ...While using average seasonal usage can protect customers from volatility in billing within a season, months on either side of the CIS seasonal change-over (April to May, October to 4 November) can be susceptible to larger swings and variances to true usage since the bill date determines the season used for the calculation. Year-over-year changes in temperature can further exacerbate or mitigate these shoulder-season variances.

NS Power has access to historical billing data, including the true meter reads used for those 16 bills. The CIS system uses this data to inform the estimation subroutine described above.

- a) While removing all confidential information, please provide energy bills issued for two randomly selected customers during the CIS seasonal change-over periods (April to May and October to November) that were generated using the CIS subroutine during the cybersecurity incident. Along with the issued bills, please include all input data with timestamps that were used, as well as the CIS routine output, in an Excel sheet with all formulas intact. In addition, please provide an explanation of how the two customers were selected.
- b) Please provide the energy bills based on actual meter readings for the same location and the same billing period from one year earlier.
- c) Is the CIS subroutine developed internally, or is it owned by a third-party service provider?
 - i. If it is owned by a third-party service provider, what is the estimated annual cost to use it?
- d) How was the CIS subroutine model trained, and how many predictor inputs (independent variables) were used for training (e.g., weather, holidays, etc.)?
 - i. Please provide the list of predictor inputs, if applicable.
- e) Was this routine validated or tested before it was approved for use?
 - i. If yes, please provide a copy of the validation report.
 - ii. If not, why was it not qualified before being approved for usage?
- f) Since the utility determined that the routine was producing higher bill estimates, has the utility back-tested the model on billing periods using actual meter reads and tracked

1 metrics such as mean error, mean absolute error, and any systematic over- or
2 under-estimation?

- 3 i. If not, please explain why.
- 4 ii. If yes, please provide the analysis report.

5
6 **Request IR-2:**

- 7 a) How does the CIS subroutine work for a customer with net-metering?
- 8 b) Why did the utility not consider providing estimated credits for customers with net
9 metering?
- 10 c) How many net-metering customers does the utility currently have?
- 11 d) For all net-metering customers, when did the utility stop providing credits, and when did it
12 resume issuing them?
- 13 e) Please provide the monthly number of net-metering customers, to date, who have and
14 have not received any credits since the cybersecurity incident was discovered in April
15 2025.
- 16 f) Are net-metering customer bills reconciled with interest if the credits are held longer than
17 expected?
- 18 g) What steps has the utility currently taken to provide estimated credits in cases where it is
19 issuing estimated energy bills?
- 20 h) Were there active net metering customers in 2025 receiving estimated bills?
 - 21 i. Did the net metering customer bills include estimated or actual readings from their
22 solar panel/wind/hydro/other resources?
 - 23 ii. Are net metering customers able to validate NS Power's kWh for 2025 on NS
24 Power's customer information system?

25
26 **Request IR-3:**

27 Please refer to the Net Metering 2025 Annual Report (Matter M12783)

28 At pages 7-8, the Report states: Please note that, due to the cyber incident, NS Power is still in
29 the process of recovering information on changes (e.g. system retirements, capacity changes,
30 program migrations) that have occurred to active participants (those customers participating in
31 net metering prior to January 1, 26 2025). Upon recovery of this data and confirmation of any
32 changes, the information provided within 'Total Active Customers' is subject to change in the 2026
33 Report. If changes have occurred during the reporting period, NS Power will clearly identify these
34 changes in the 2026 Report.

1 The 2025 report includes Table 1 (Summary of Net Metering Results for the Period ending
2 December 31, 2025) and Table 2 (Annual Average Nameplate Capacity for the Past Five Years)

3
4 Appendix A provides the source, size, location, feeder, and application of aggregation for each
5 customer, as well as additional analysis and discussion with respect to the number of installations
6 by resource, locational clustering, amount of sales reductions, amounts paid to customers, and
7 trends.

8
9 In response to a directive in the Board's decision letter from the 2024 Annual Report, NS Power
10 filed Appendices B, C and D, described at page 6 of the 2025 Annual Report:

11 In response to NSEB IR-3 part (a), Appendix B contains the source data for payouts for
12 the reporting years 2011-2019 and 2025. As a result of the cyber incident, NS Power was
13 unable to recover the source data for the payout tables for 2020-2024.

14 In response to NSEB IR-3 part (b), Appendix C provides the Board with the payout amounts
15 to all customers expressed on a \$/kWh basis relative to estimated annual generation for
16 all active customers between 2015 and 2024.

17 The Company has also included, as Appendix D, a Legacy Net Metering payout analysis report
18 that examines the change in excess banked energy payouts between 2023 and 2024, along with
19 the key drivers behind that change.

- 20 a) Please confirm whether the data set out in Table 1 and Table 2 of the 2025 Annual Report,
21 and Appendix A, is actual data or estimated data. If some of the data is estimated, please
22 confirm which data.
- 23 b) If confirmed that some of the data referenced in subsection a) for 2025 is estimated,
24 please explain how the estimates were carried out and whether the actual source data
25 will be recovered in the future. If so, when?
- 26 c) Please confirm whether the data set out in Appendix B is actual data or estimated data.
- 27 d) If confirmed that some of the data referenced in Appendix B is estimated, please explain
28 how the estimates were carried out and whether the actual source data will be recovered
29 in the future. If so, when?
- 30 e) If the cyber incident occurred in 2025, why is the data from 2020-2024 unavailable but
31 the data prior to that is available?
- 32 f) While the directive and NS Power's response in subsection c) and d) related to the 2024
33 Annual Report, is the 2025 data available? If not, will it be recoverable in the future? If so,
34 when?
- 35 g) Please confirm whether the data set out in Appendix C is actual data or estimated data.

1 h) If confirmed that some of the data referenced in Appendix C is estimated, please explain
2 how the estimates were carried out and whether the actual source data will be recovered
3 in the future. If so, when?

4 i) While the directive and NS Power's response in subsection g) and h) related to the 2024
5 Annual Report, is the 2025 data available? If not, will it be recoverable in the future? If so,
6 when?

7
8 **Request IR-4:**

9 Please refer to the Net Metering 2025 Annual Report (Matter M12783) - Table 1 (Summary of Net
10 Metering Results for the Period ending December 31, 2025).

11 a) Table 1 includes data relating to "Payout for excess banked generation to customers on
12 anniversary date". If any of the data in Table 1 is estimated and actual data subsequently
13 changes the amount owing to, or from, customers, how does NS Power intend to deal
14 with such variances?

15
16 **Request IR-5:**

17 a) Is the source data to be compiled for the Net Metering 2026 Annual Report able to be
18 accurately measured or collected, or must the data still be estimated?

19 b) If the data for the 2026 Annual Report is still being estimated, please confirm whether the
20 actual source data will be recovered in the future. If so, when?

21
22 **Request IR-6:**

23 Please refer to the Commercial Net Metering Program (CNMP) 2025 Annual Report, including
24 Appendix A (Matter M12782)

25 a) Please confirm that the data contained in the report (including in Appendix A) is actual
26 data and it is not estimated.

27 b) If confirmed that some of the 2025 data is estimated, please explain how the estimates
28 were carried out and whether the actual source data will be recovered in the future. If so,
29 when?

30 c) If any of the data in the CNMP 2025 Annual Report is estimated and actual data
31 subsequently changes the amount owing to, or from, customers, how does NS Power
32 intend to deal with such variances?

Request IR-7:

On page 2 of Monthly Update #7, it is noted that the number of customer bills requiring estimation has returned to normal levels, at around 2% percent or less. In response to IR-14(c), the utility provided a table indicating that the pre-cyber incident percentage of estimated bills was 0.54%.

- a) When does the utility expect to return to the pre-cyber incident percentage level for bill estimating?
- b) How many bills were issued after the utility determined that meter connections to its billing system have been restored to date. Please provide a breakdown of the Bills issued based on customer class, number of bills that were based on actual reads and number of bills that were estimated.

Request IR-8:

On page 2 of Attachment 3, the utility provides a restoration roadmap. Under the Customer section, please provide a work breakdown structure of each task, along with any identified risks.

Request IR-9:

Please provide specific and detailed information addressing whether all or any part of the information about current NS Power customers was available in NS Power's systems to be stolen in the cyber attack in circumstances when:

- a) That information should not have been collected in the first place based on NS Power's data collection and retention policies.
- b) That information should have been destroyed based on NS Power's data collection and retention policies.
- c) That information was collected contrary to any provincial or federal statute or regulation.
- d) That information had not been destroyed, contrary to any provincial or federal statute or regulation.

Request IR-10:

Please provide specific and detailed information addressing whether all or any part of the information about former NS Power customers was available in NS Power's systems to be stolen in the cyber attack in circumstances when:

- a) That information should not have been collected in the first place based on NS Power's data collection and retention policies.

- 1 b) That information should have been destroyed based on NS Power's data collection and
2 retention policies.
- 3 c) That information was collected contrary to any provincial or federal statute or regulation.
- 4 d) That information had not been destroyed, contrary to any provincial or federal statute or
5 regulation.

6

7 **Request IR-11:**

8 Please confirm that, at all material times relating to the cyber attack, NS Power was fully compliant
9 with all applicable statutes and regulations relating to the collection and retention of personal
10 information of customers.

- 11 a) If not confirmed, please identify each statute or regulation that NS Power had not complied
12 with, the reason for its non-compliance, and the steps that have, are or will be taken to
13 ensure compliance in the future.

14

15 **Request IR-12:**

16 Please confirm that, at all material times relating to the cyber attack, NS Power was fully compliant
17 with all its internal policies relating to the collection and retention of personal information of
18 customers.

- 19 a) If not confirmed, please identify each policy that NS Power had not complied with, the
20 reason for its non-compliance, and the steps that have, are or will be taken to ensure
21 compliance in the future.

22

23 **Request IR-13:**

24 Please provide any memos, assessments, reports or email messages prepared on or after April
25 25, 2025, discussing how customers would be advised about the cybersecurity breach and the
26 theft of their personal information, and what information would be provided to them.

27

28 **Request IR-14:**

29 Please provide any instructions, guidelines or scripts that were prepared by NS Power, or on its
30 behalf, for use by NS Power's Customer Care Centre or TransUnion in its communications with
31 customers about the cybersecurity breach and the theft of customer personal information.

Request IR-15:

In its response to NSEB IR-1 (Exhibit N-2), NS Power said it “adopted a best-practices approach to mitigating potential harm to customers whose personal information was impacted by the Incident.” Please explain why NS Power considers its approach a “best-practice” and identify the benchmarks or metrics against which it assessed its approach.

Request IR-16:

Please provide any memos, assessments, reports or email messages prepared by NS Power or on its behalf about the difficulties that customers experienced contacting NS Power’s Customer Care Centre and TransUnion in the days following NS Power’s announcement of the cyber attack and the theft of customer information. Please include all call statistics about the cybersecurity breach and the theft of customer personal information, including number of calls, wait time, disconnections, number of calls abandoned, number of callbacks, time to wait for callbacks, average talk time, etc., from April 25, 2025, to October 31, 2025.

Request IR-17:

Regarding the theft or suspected theft of personal information about individuals who were previously customers of NS Power, but who were no longer customers at the time of the cyber attack:

a) Is NS Power able to provide more information about these customers than was provided in its response to NSEB IR-2(b) (Exhibit N-2)?

iii. If so, please provide the total number of such customers who were impacted, and also provide a breakdown, by year, based on when they ceased to be an NS Power customer.

iv. If not, please provide as much information as possible about the number of former customers impacted, and how long it had been since they were customers.

Request IR-18:

Please provide any memos, assessments, reports or email messages about NS Power’s collection, use, retention and destruction of customer social insurance numbers since April 25, 2015, 10 years before the cyber attack.

Request IR-19:

How is the five-year credit monitoring provided to customers being funded?

1 **Request IR-20:**

2 Please provide any memos, assessments, reports or email messages prepared by NS Power or
3 on its behalf about its initial pause to customer billing after the cyber attack and its resumption of
4 billing, including any discussions about the methods, processes or procedures it would use to
5 estimate customer bills until its systems were restored and meters were again communicating,
6 and any discussions about the resources required and its approach to manually reading meters
7 in the interim.

8
9 **Request IR-21:**

10 NS Power's response to NSEB IR-1 (Exhibit N-2), Attachment 4, page 19 of 20 including the
11 following frequently asked question and response:

12
13 **I haven't been a customer for 10 years? Do you still have my data?**

14 **Last updated:** Wednesday, June 25, 2025

15
16 This is a really important question to be answered as part of the investigation into the
17 incident. [Emphasis in original]

18
19 Please provide the answer to this question, as determined by NS Power in its investigation, and
20 explain why, on June 25, 2025, NS Power did not know whether it had retained data related to
21 individuals who had not been customers for 10 years.

22
23 **Request IR-22:**

24 NS Power's response to NSEB IR-12(a) (Exhibit N-2), NS Power said that "some customers
25 received bills closer together as NS Power caught up on billing after the pause from April 1 25 -
26 June 4".

27 a) Does this mean that NS Power sent off-cycle bills to customers?

28 i. If so, please explain why this was done given NS Power's responses to Exhibit N-
29 93, NSEB IR-3(b) and (c) in Matter M12451.

30 ii. If not, please explain in detail.

31
32 **Request IR-23:**

33 In a letter to the Honourable Tom Taggart, MLA for Colchester North, Chair, Nova Scotia Standing
34 Committee on Natural Resources and Economic Development dated January 31, 2026, which
35 was attached to Monthly Update #5, dated February 5, 2026, NS Power stated:

1 Actual overpayment and underpayment scenarios resultant from estimates are difficult to
2 isolate, as trued-up usage cannot be ascribed to the date of use. However, patterns on the
3 trued-up bill allow some sizing of customer experience in both areas.

4 ○ Overpayment: Following the return to regular billing cycles post cyber-incident,
5 less than 1% of bills issued have created a scenario where estimated usage, once
6 paid, resulted in a credit balance for the customer on their next bill. Account credits
7 are automatically applied to the customer's subsequent bill for ongoing energy use.
8 However, for customers who prefer a refund, refunds by cheque are available upon
9 customer request. In Q4 of 2025, NS Power supported customers with 2,080
10 refund requests, down from 2,268 in Q4 of 2024 and 2,542 in Q4 of 2023. Refunds
11 can be issued for a variety of issues, including customers who might have entered
12 a larger amount when paying through their bank or customers who have closed an
13 account that had a credit balance on it.

14 ○ Underpayment: The percentage of active residential accounts in arrears is a useful
15 gauge of underpayment and has run nearly double the rate persistent prior to the
16 cyber incident. On December 31, 2025, 7.23% were in arrears, compared to 4.46%
17 as of the same date in 2024. This trending is regularly reviewed by Nova Scotia
18 Power, the Affordable Energy Coalition, and the Consumer Advocate and an
19 annual report is filed with the Nova Scotia Energy Board each year. This is a major
20 area of focus for NS Power- to help these customers get into an Equal Billing plan
21 or additional payment arrangement if they need support paying their balance.

22 a) Please provide any memos, assessments, reports or email messages prepared by NS
23 Power or on its behalf about the patterns on trued up bills.

24
25 b) For the "less than 1%" of bills issued where there was a scenario where estimated usage,
26 once paid, resulted in a credit balance for the customer on their next bill:

27 i. What was the actual number of bills where this scenario occurred?

28 ii. What was the average amount of the credit for residential customers?

29
30 c) How many bills were issued where there was a scenario where estimated usage, once
31 paid, did not result in a credit on the next bill but produced a bill in the period that was
32 lower than would have been expected for that billing period.

33
34 d) Given that NS Power encouraged customers who were concerned about overestimated
35 bills to pay amounts that were different than the amount that was presented on the bill and
36 withheld late fees and interest and paused collection activities, please explain why NS
37 Power attributes an increase in the percentage of accounts in "arrears" to underestimation.

38
39 **Request IR-24:**

40 Please provide any memos, assessments, reports or email messages prepared by NS Power, or
41 on its behalf, about concerns raised by customers about overestimated bills.

1 **Request IR-25:**

2 Have NS Power's billing practices relating to each of the following returned to their pre-
3 cybersecurity breach state, and if not, what is the current status and timeline when normal function
4 is expected to occur:

- 5 a) Time of use/day rates.
- 6 b) Net-metering billing arrangements.
- 7 c) Single-phase meters without a physical demand rest feature for demand billing customers.

8