

NOVA SCOTIA ENERGY BOARD

IN THE MATTER OF: the *Public Utilities Act*

– and –

**Time-Varying Pricing Pilot Year Four (2024/25)
Evaluation Report**

INFORMATION REQUESTS

To: **Kathleen Murray**
Nova Scotia Power, Inc.

From: The Consumer Advocate

Responses Due: September 14, 2026

Copies: 1 electronic copy (PDF searchable)

Contact Person: **David J. Roberts**
Consumer Advocate
Pink Larkin
1463 South Park Street
Halifax, NS B3J 3S9
Tel: (902) 423-7777
Email: droberts@pinklarkin.com

The following Information Requests are directed to Nova Scotia Power Incorporated ("NS Power") regarding its Time-Varying Pricing Pilot Year Four (2024/25) Evaluation Report, filed in Matter M12932. Page references are to that document unless otherwise indicated.

Request IR-1:

Reference: M12932 N-1 TVP Evaluation Report, Appendix A, pp. 71-72. Table 37 and the following statement:

“Table 37 summarizes the estimated changes in load during the highest ANL hours overall, as well as during ANL hours that coincide with TOU peak periods. Results indicate that the load increase or reduction by commercial TOU participants was not statistically significant during the top 20, 50, and 88 highest ANL hours. When focusing specifically

on ANL hours that coincide with TOU peak periods, the commercial TOU participants exhibit insignificant load increases or decreases during the top 20, 50 and 88 ANL hours compared to the corresponding highest ANL hours overall.”

Question: How would NS Power characterize the commercial TOU tariff’s load-shifting performance given that Table 37 shows no statistically significant load change during any of the top 20, 50 or 88 highest ANL hours, whether coincident with TOU peak periods or overall?

Request IR-2:

Reference: M12932 N-1 TVP Evaluation Report, Appendix A, p. 73, and Table 40 on that page.

“The commercial TOU customers experienced an average Bill increase of approximately 12.3 \$/day and 3.8 \$/day across the Winter and annually, respectively, which are statistically significant.”

Table 40 reports those changes as relative average bill savings of –42.8% for the Winter and –13.2% annually.

Question: Please state whether NS Power considers commercial TOU participants to have been made worse off financially in Phase 4, in light of these reported statistically significant bill increases and describe any tariff, eligibility or screening changes NS Power is considering before the Pilot resumes for the 2026/27 Season on November 1, 2026

Request IR-3:

Reference: M12932 N-1 TVP Evaluation Report, Appendix A, p. 18.

“When separated by rate class, Small General customers exhibit a load increase during peak periods (0.22 kW) relative to the General rate class that demonstrate a load reduction (2.6 kW).”

Questions:

- a) Please provide the Phase 4 commercial TOU and commercial CPP results separately for the Small General and General rate classes, including load reduction, ANL-hour, usage and bill-impact results.
- b) Given the load increase for Small General during peak periods, please state what changes to the Small General TOU and CPP tariffs NS Power is considering, including redesign, defaulting to the tariff, or retirement of the offering.

Request IR-4:

Reference: M12932 N-1 TVP Evaluation Report, Appendix A, p. 15.

“Notably, no change in monthly demand was observed in MURB TOU participants, despite the removal of the demand charge.”

1 **Question:** Does the referenced finding of no change in monthly demand effect NS Power's
2 assessment of demand charges as a barrier to load shifting on the other TVP tariffs. Why or why
3 not.

4
5
6 **Request IR-5:**

7 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix Am Table 52 and the following
8 statement from Appendix A, p. 92:

9 "Results indicate that MURB TOU participants exhibit load reduction during the top 20,
10 50, and 88 highest ANL hours, although only reductions during the top 50 and 88 highest
11 ANL hours are statistically significant. When focusing specifically on ANL hours that
12 coincide with TOU peak periods, participants exhibit load reductions of 9.6%, 12.2% and
13 9.1% during top 20, 50, and 88 hours, although only load reductions during top 50 and 88
14 are statistically significant."

15
16 **Question:** The top-20 ANL-hour load reduction reported for MURB TOU participants (3.3 ± 4.0
17 kW, Table 52) is not statistically significant, while the top-50 and top-88 reductions are. Please
18 identify which of those three ANL-hour distributions NS Power relies on in assessing the MURB
19 TOU tariff's contribution to peak reduction, and explain how the absence of a statistically
20 significant result in the top 20 ANL hours is treated in that assessment.

21
22
23 **Request IR-6:**

24 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix A, p. 91 and Table 51, footnotes b
25 and c.

26 "This effect is evaluated based on the same DiD approach that was applied to the load
27 reduction calculation, but *specifically for the four hours* following the morning and
28 evening peak hours. As summarized in Table 51, MURB TOU participants exhibit average
29 load reductions of 1.2 kW and 0.53 kW during the morning and evening snapback periods,
30 respectively, although only the load reduction during morning snapback period was
31 statistically significant. ...

32
33 b *From 11 AM – 2 PM*; c From 9 PM – 1 AM." (emphasis added)

34
35 **Question:** Please explain why the snapback window is described as four hours, while the footnote
36 for the morning window indicates a three-hour timeframe (11AM – 2 PM). If a three-hour time
37 frame was used for the analysis, why was it different than the four-hour window for the evening
38 event?

39
40
41 **Request IR-7:**

42 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix A, p. 20.

43 "The objective of these rates is to provide customers with rate choice that can enable them
44 to save on their electricity bill while shifting demand from peak periods. By promoting
45 load shifting, the program aims to reduce, in the near-term, fuel and purchased power costs,

1 and over the longer-term reduce costs in the form of avoided generation, transmission, and
2 distribution infrastructure capital costs.”
3

4 **Question:** The Year Four Report identifies avoided generation, transmission and distribution
5 capital costs as a longer-term objective of the TVP tariffs, but reports results only as per-customer
6 load reduction (kW), daily usage (kWh/day) and daily bill impacts (\$/day). Please confirm that the
7 Year Four Report does not quantify, for any TVP tariff, either the aggregate peak load reduction
8 achieved in MW or the value of that reduction in dollars. If the report does specify this value,
9 please identify where.
10
11

12 **Request IR-8:**

13 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix E, Attachment 3, p. 24 of 60.

14 “Customer benefits calculated using avoided cost values will be recalculated to reflect the
15 updated Demand Side Management (DSM) Avoided Cost series from August 2024.”
16

17 **Question:** Please state whether the recalculation of customer benefits against the August 2024
18 DSM Avoided Cost series has been completed. If it has, please provide it for each TVP tariff,
19 showing the avoided cost value applied to Phase 4 load reduction in dollars, separated into
20 generation capacity, transmission, distribution and fuel or energy components. If it has not, please
21 state when it will be completed.
22
23

24 **Request IR-9:**

25 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix E, Attachment 4, p. 17 of 47 (Rate
26 Design Scorecard, Fair Value criterion added at Technical Session 2).

27 “The Tariff provides customers savings equal to the avoided cost to the system when
28 considering load shifting.”
29

30 **Question:** Please provide the completed Rate Design Scorecard for each TVP tariff for Phase 4,
31 including the Fair Value criterion quoted above, and state the dollar avoided-cost figure used to
32 score that criterion for each tariff. If that criterion has not been scored, please explain how NS
33 Power assesses whether the TVP tariffs are cost-reflective in its absence.
34
35

36 **Request IR-10:**

37 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix A, p. 148, quoting the Board’s
38 Decision in M12249:

39 “... the Board notes that E1 should be fully prepared to address the questions raised in this
40 proceeding about potential overlap with NS Power’s Critical Peak Pricing Program and the
41 targeting of constrained areas of the transmission and distribution system in its application.
42 If it fails to adequately address these issues, this may complicate the approval of its DSM
43 Plan. The Board expects NS Power to cooperate fully with E1 in exploring these issues.”
44
45

1 **Question:** With reference to the Board’s direction in M12249 quoted above, please describe each
2 program’s ability to target constrained areas of the transmission and distribution system, state what
3 NS Power has done to date to cooperate with E1 in exploring that question, and describe the equity
4 and rate-impact consequences of funding demand response through DSM charges as against
5 through tariff design.
6
7

8 **Request IR-11:**

9 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix A, p. 17.

10 *For Residential TOU:* “Significant enhancements to load reduction (+0.40 kW) occurred
11 where technology (i.e. Eco Shift + smart device) were present.”
12

13 *For Residential CPP:* “Significant enhancements to load reduction (0.46 kW) occurred
14 where technology (i.e. Eco Shift + smart devices) were present.”
15

16 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix A, p. 27.

17 “As of the end of TVP Phase 4, enrolment 2,500 participants were enrolled in E1’s Eco
18 Shift program, 209 of which were also TVP participants.”
19

20 **Question:** Given that concurrent EcoShift enrolment improves results and that currently the
21 percentage of TVP customers enrolled in EcoShift is small, please state whether NS Power has
22 adopted, or intends to adopt, any strategy to incentivize, subsidize, or require enabling technology
23 — including smart thermostats, controlled electric water heating or other thermal storage, or other
24 automated load control — as a condition of or inducement for TVP enrolment.
25
26

27 **Request IR-12:**

28 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix E, Attachment 2, p. 16 of 121.

29 *Regarding TVP and EcoShift cross enrolment:*
30

31 “NS Power and EfficiencyOne (E1) will be monitoring this year before deciding whether
32 cross-program enrolment should continue for future years.”
33

34 “The marketing timelines of both pilot programs differ, and both NS Power and E1’s
35 marketing teams are working collaboratively to grow cross-promotional efforts more
36 holistically.”
37

38 **Question:** Given the cross-enrolment load-reduction results addressed in Request IR-11, Please
39 describe the cross-promotional activity undertaken during Phase 4 and its results, and describe NS
40 Power’s plan for combining or cross-marketing the Eco Shift program with the TOU and CPP
41 tariffs when the Pilot resumes.
42
43

44 **Request IR-13:**

45 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix B, p. 6 of 67.

46 “Table references presented in the report refer to the detailed banner tables.”

Question: Are these banner tables filed on this docket? If not, please file those banner tables, in native format, together with the full survey questionnaire.

Request IR-14:

Reference: M12932 N-1 TVP Evaluation Report, Appendix B, p. 13 of 67.

“Overall satisfaction with the Time-Varying Pricing Rate Pilot (TVP) is consistent from 2025, with top 4 box scores increasing by two points.”

Question:

- a) Please state the basis for reporting results in the chosen bands — such as “top box” and “top 4 box,” or 7–10, 5–6 and 1–4 — rather than as means or a full distribution (i.e. counts by each number).
- b) Please identify any benchmark, norm or internal targets NS Power applies in judging customer satisfaction using scaled responses.
- c) Why is a score of 7 is counted within the “top 4 box.”? Does NS Power considers a mean of 7 out of 10 to be a satisfactory result? Please explain your response.

Request IR-15:

Reference: M12932 N-1 TVP Evaluation Report, Appendix B — mean scores as displayed in the survey charts at the pages indicated.

Survey question	Reported mean (2025, 10-point scale)	Appendix B page
Q.24b – Overall satisfaction with the TVP Rate Pilot	Overall 7.1 (n=2,103); TOU 6.9 (n=1,332); CPP 7.5 (n=771)	p. 13 of 67
Q.15 – “I understand how the rate plan influences my power bill”	TOU 7.6; CPP 7.7	p. 51 of 67
Q.15 – “The power bill I last received was easy to understand”	TOU 7.2; CPP 7.4	p. 51 of 67
Q.15 – “The rate plan positively impacts my power bill”	TOU 6.6; CPP 7.3	p. 51 of 67
Q.15 – “The power bill I received was as expected”	TOU 5.7; CPP 6.6	p. 51 of 67
Q.11a.v – Feelings about the number of peak events called	CPP 7.2 (n=771)	p. 33 of 67
Q.7d – Satisfaction with Customer Care experience	TOU 7.1 (n=163); CPP 7.2 (n=109)	p. 24 of 67

Question: Please explain how those individual results produce an overall mean of 7.1, identify which of them NS Power considers to be pulling the overall result down, and state which of them NS Power regards as areas of concern.

1 **Request IR-16:**

2 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix A, p. 22, Table 6 (figures as reported):
3 Domestic TOU — 2,174 enrolled prior to the Phase 4 Winter plus 4,271 newly enrolled,
4 less 829, leaving 5,616 enrolled at March 31, 2025; 87% of enrolled participants completed
5 Phase 4.

6
7 Domestic CPP — 885 plus 2,023, less 266, leaving 2,642 enrolled at March 31, 2025; 91%
8 completed Phase 4.

9
10 **Question:** NS Power reports Phase 4 residential retention of 87% (Domestic TOU) and 91%
11 (Domestic CPP). These retention figures are positive, yet overall participant satisfaction stands at
12 a mean of 7.1 out of 10. (See Request IR-15) Please explain how NS Power reconciles those two
13 results, state whether it regards the satisfaction results as a matter of concern, and explain why or
14 why not.

15
16
17 **Request IR-17:**

18 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix B, p. 14 of 67.

19 “Comparing satisfaction results across the provinces, overall TVP pilot participant
20 satisfaction is significantly lower in Western Nova Scotia compared to Metro. While
21 smaller sample sizes prevent confidence in a statistical variation for the individual pilots,
22 Western Nova Scotia participants appear to be at least somewhat less satisfied with ToU,
23 likely driven by the higher number of participants in that region indicating electricity as
24 primary, secondary, or tertiary heat source (91%) compared to the rest of the province (NE
25 – 83%; Metro – 83%; CB – 85%).”

26
27 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix B, p. 16 of 67.

28 “Satisfaction among CPP and ToU participants does not vary significantly between those
29 relying on electricity as their primary heat source and those who are not.”

30
31 **Question:** The first reference states that Western Nova Scotia is likely less satisfied due to the
32 prevalence of electric heating, but the second reference states that satisfaction does not vary by
33 heat source. Please reconcile these statements.

34
35
36 **Request IR-18:**

37 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix E, Attachment 4, p. 12 of 47.

38 “This indicates that, at the anticipated levels of load shift for a TOU customer, the current
39 rate structure and/or pricing signal ratios of the existing TOU rate are the primary
40 restrictions, independent of demand charge. In order to achieve load shifting levels above
41 6%, revisions to the demand pricing structure should also be considered as a secondary
42 improvement if not otherwise mitigated by technology to optimize demand.”

43
44 “Explore the impact to customer bill and demand with a time-differentiated demand charge
45 TOU rate (i.e. separate peak and off-peak demand charges). Note: NS Power’s current
46 systems cannot support this as configured with current demand calculation.”

1 **Question:** Please answer the following questions regarding the quotes and references above:

- 2 a. Please state the current expected timeline, scope and cost for the Customer Information
3 System replacement or upgrade needed to support a time-differentiated (peak/off-peak)
4 demand charge for TOU rate classes.
- 5 b. Pending that system capability, please state whether NS Power has evaluated any interim
6 option for approximating a time-differentiated demand-charge signal, and if not, why not.
- 7 c. Please confirm whether NS Power's stated position quoted above — that the current rate
8 structure and/or pricing signal ratios, rather than the demand charge, are the primary
9 restriction on load shifting — reflects a decision not to pursue elimination or restructuring
10 of non-coincident demand charges for General Service customers, and if so, please state
11 the basis for that decision.
- 12
13

14 **Request IR-19:**

15 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix E, Attachment 5, p. 2-3 of 12.

16 *Regarding targeting SMB customers by load profile:*

17 “This approach was explored. Customers who could save after shifting load were identified
18 as priority recruitment targets. After further review of these priority recruitment targets, it
19 appeared their business models would likely not respond to load shifting.”

20

21 “For the next active recruitment period, this approach will be repeated using learnings from
22 the most recent EM&V and incorporating feedback from key account managers such as
23 filtering on customers with multiple accounts customers.”

24

25 **Reference:** M12932 N-1 TVP Evaluation Report, Appendix E, Attachment 3, p. 22 of 60.

26 “The model uses AMI consumption data and Environment Canada weather data to classify
27 customers into each category.”

28 The 2023 Classification table on that page reports: Primary Electric 38.5% (158,656
29 customers); Secondary Electric 16.0% (65,941); Non-Electric 43.4% (178,887);
30 Inconclusive 2.2% (8,915).

31

32 **Question:** The references above show NS Power considering load-profile analysis to select which
33 non-enrolled commercial customers to prioritize for recruitment outreach.

- 34 a. Has NS Power used an equivalent data-driven approach — for example, the AMI-and-
35 weather space heating classification model described at Appendix E, Attachment 3, p. 22
36 of 60, or any other AMI-derived indicator of electric heating — to identify non-enrolled
37 residential customers for TVP marketing, education or recruitment outreach?
- 38 b. If yes, please state in which seasons, for how many customers, and with what enrolment
39 result by heating class.
- 40 c. If not, does NS Power plan to do so once active recruitment resumes?
- 41
42
43