

NOVA SCOTIA ENERGY BOARD

IN THE MATTER OF: *The Public Utilities Act*, R.S.N.S. 1989, c.380, as amended

IN THE MATTER OF: **Nova Scotia Power Inc.** – Time-Varying Pricing Pilot Program –
2024/25 (Year Four) and 2025/26 (Year Five) Evaluation Reports

INFORMATION REQUESTS
(NON-CONFIDENTIAL)

To: **Kathleen Murray**
Regulatory Counsel
Nova Scotia Power, Inc. (NS Power)

From: Small Business Advocate

Responses Due: September 14, 2026

Copies: 1 electronic copy (PDF searchable)

Contact Person: **Melissa P. MacAdam**
Blackburn Law Inc.
Small Business Advocate
Phone (902) 835-8544
mmacadam@blackburnlaw.ca

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Request IR-1:

Refer to M12932, Exhibit N-1, NS Power Time Varying Pricing (TVP) Pilot Program Year Four (2024/2025) Evaluation Report, and Exhibit N-2, NS Power TVP Year 4 Report Appendix A (Clean) - Refiled, dated July 13, 2026, (collectively the “Year 4 Report Results”). Appendix A includes Table 5 “TVP Participation on March 31 by Phase” and Tariff and Table 6 “Participation Summary and Retention Results”, on page 8 (PDF page 22 of 157), both shown below.

Table 5: TVP Participation on March 31 by Phase and Tariff

Phase	DOM TOU	SMG TOU	GEN TOU	DOM CPP	SMG CPP	GEN CPP	MURB TOU	Total
Phase 1	676	24		284	8		0	992
Phase 2	891	17		373	2		0	1,283
Phase 3	2,241	37	19	922	3	6	0	3,228
Phase 4	5,616	37	18	2,642	17	36	10	8,376

The average customer retention rate per TVP Tariff ranges from 87% (Domestic TOU) to 100% (MURB TOU), refer to Table 6 for additional details.

Table 6: Participation Summary and Retention Results

TVP Tariff	A Enrolled prior to beginning of Phase 4 Winter (October 31, 2024)	B Enrolled during Phase 4 Winter (November 1, 2024 to March 31, 2025)	C Withdrew mid Phase 4 Winter (November 1, 2024 to March 31, 2025)	D Remained enrolled at end of Phase 4 Winter (March 31, 2025)	$1 - \left(\frac{C}{A + B} \right)$ Percentage of Enrolled Participants Who Completed Phase 4
Domestic TOU	2,174	4,271	829	5,616	87%
Domestic CPP	885	2,023	266	2,642	91%
Small General TOU	36	5	4	37	90%
Small General CPP	3	16	2	17	89%
General CPP	19	0	1	18	95%
General TOU	6	32	2	36	95%
MURB TOU	10	0	0	10	100%

- Referring to Table 5, how does NS Power explain the significant increase in participation by the Small General (SMG) and General (GEN) customer classes in the Critical Peak Pricing (CPP) program for Phase 4 compared to Phase 3? Was this increase the result of a change in how NS Power markets this program to those customer classes?
- Referring to Table 6, which shows the number of SMG and General participants who withdrew mid-Phase 4 winter, what reasons did these customers give for their decision to withdraw? If none was given at time of withdrawal, did NS Power follow up with them to gain more information regarding their decision?
- Does NS Power conclude from the results shown in Tables 5 and 6 that Time of Use (TOU) is a more or less attractive program than CPP to the small business and commercial customer classes that SBA serves? If so, please explain.

Request IR-2:

Refer to Exhibit N-1, Year 4 Report Results, Summary of Year Four Evaluation Results, pp. 2-3 of 5, which states:

Importantly, the Year Four evaluation identifies statistically significant load shifting for commercial TOU and CPP tariffs for the first time, representing a key advancement relative to prior evaluations, which did not find statistically significant results for commercial TVP tariffs.

The evaluation further examines customer response during periods of highest adjusted net load and confirms that residential TVP participant load reductions continue to occur during these periods. For commercial participants, CPP is the only tariff demonstrating load reduction during the top 20, 50, and 88 highest adjusted net load hours.

- a) How does NS Power explain the “statistically significant load shifting observed for commercial TOU and CPP tariffs for the first time”? I.e., have the TOU or CPP programs changed for Year 4 in a way that could explain this difference? If yes, please explain.
- b) Did the statistical methodology used by NS Power to evaluate Year 4 results compared to the statistical methodology used to evaluate Year 3 change in a way that could explain this difference? If yes, please explain.
- c) How will these results, especially those demonstrating load reduction during the top 20, 50 and 88 highest adjusted net load hours, influence how NS Power will evaluate participation for subsequent pilot program years?
- d) How many of these top hours demonstrating load reductions were during the morning or evening peak time periods?

Request IR-3:

Refer to Exhibit N-2, Year 4 Report Results Appendix A, page 4, (PDF 18 of 157), and Table 2 Summary of Load Reductions by Commercial TVP Tariff, and the text that follows Table 2 which discusses the results for Commercial TOU and Commercial CPP Participants, and answer the following questions:

- a) In the text that follows Table 2, (on page 4 (PDF page 18 of 157) NS Power states that for Commercial TOU participants:

Overall, commercial TOU participants experienced an increase in daily electricity usage of 15.4 kWh/day. 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). These results suggest that commercial TOU participants under General Tariff are more responsive to price signals, while those under Small General Tariff show counterproductive responses. During the highest

ANL hours that coincide with TOU peak periods, participants did not exhibit statistically significant load reduction.

- i. Please confirm whether NS Power is saying that it has concluded that participants in the Small General customer class will not benefit from TOU rates or that this particular group of participants did not respond to the TOU price signal?
- ii. What does NS Power consider it could do to improve the TOU program to make it more cost effective for, or attractive to, Small General customers?

- b) In the text that follows Table 2, on page 4 (PDF 18 of 157) NS Power states that for Commercial CPP participants:

Overall, commercial CPP participants experienced a significant reduction in daily electricity usage of 65 kWh/day during CPP event days. When separated by rate class, Small General customers exhibit no statistically significant changes in load during peak periods compared to the General rate class that demonstrate a load reduction (9.7 kW). These results suggest that commercial CPP participants under General Tariff are more responsive to price signals, while those under Small General Tariff show statistically insignificant responses. During the highest ANL hours that coincide with CPP peak periods, participants achieved higher-than average load reductions.

- i. Please confirm whether NS Power is saying that it has concluded that participants in the Small General customer class will not benefit from CPP rates or that this particular group of participants did not respond to the CPP price signal?
- ii. What is the difference between a “counterproductive response”, as in the case of the TOU program, and an “insignificant response” as in the case of the CPP program?
- iii. What does NS Power consider it could do to improve the CPP program to make it more cost effective for, or attractive, to Small General customers?

Request IR-4:

Refer to Exhibit N-2, Year 4 Report Results Appendix A, page 113 (PDF page 127 of 157), Section III.3.2 Commercial TOU & CPP and the paragraph describing the Linear Mixed Effect Model, which states in part:

Given the relatively small sample sizes for commercial TOU (n = 50) (Table 33) and commercial CPP (n = 28) (Table 42), and heterogeneity of commercial TVP participants including General and Small General businesses, a careful selection process between Fixed Effect and Mixed Effect modeling for Commercial-TVP impact evaluation was considered, where the choice of the analysis approach can affect the precision and reliability of the estimated TVP program impacts. This comparison is accounted for in Attachment V: Validation of Mixed Effects Regression where the mixed effects model is determined to be a solution to heterogeneity.

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2 Please also refer to NS Power's TVP Pilot Year 3 2023-2024 evaluation report, (M11823, Exhibit
3 N-1) page 36 (PDF 50 of 163), where Econoler states:

4
5 Table 26 summarizes the impact results for commercial TOU participants in terms of load
6 reductions and usage level savings. None of these results is statistically significant, which
7 is partially explained by the small sample sizes and the heterogeneity nature of commercial
8 participants.
9

- 10 a) Please confirm if NS Power is aware whether Econoler considered the type of modeling
11 that is outlined in the paragraph describing the Linear Mixed Effect Model that was quoted
12 above from the Year 4 Report Results in its Year 3 evaluation.
13 b) How do the results presented in this Year 4 report change, if at all, NS Power's view of the
14 value of commercial, including small business, participation in and plans for recruitment
15 in its TOU and CPP programs?
16 c) Please explain, in plain language, how the use of a mixed effects model yielded measurable
17 and statistically significant results for this year, as shown in Tables 5 and 6 discussed
18 above, when the methodology used for prior years reports did not.
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21 **Request IR-5:**

22 Refer to Exhibit N-2, Year 4 Report Results Appendix A, pages 14-15, (PDF pages 28-29 of 157),
23 Chapter 2 Control Group Selection and section 2.2 Commercial TOU & CPP, which states:

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25 The same methodological approach as used with residential control group (with exception
26 to Neighbourhood Criteria, Heating Classification, and Eco Shift) was used in attempting
27 to select a control group for Small General and General (i.e. Commercial) TOU and CPP
28 rates. The load profiles comparison of the potential control group is provided for Small
29 General (TOU and CPP) and General (TOU and CPP), respectively, in Figure 7, Figure 8,
30 Figure 9, and Figure 10. The results indicate poor matching for control selection as
31 reflected in the low match accuracy, suggesting these control groups are unsuitable. This
32 result is similar to previous Phases, as such, the regression analysis for these TVP Tariffs
33 will be within-subject (i.e. semi-DiD).
34

- 35 a) Are the results shown in Figure 10 (on page 17, PDF 31 of 157) consistent with the results
36 shown in Figure 31 and Table 34 on page 53 (PDF page 67 of 157) that show a Post-
37 Treatment effect by Commercial TOU participants during both the Morning and Evening
38 Peak Hours and an overall peak reduction of 0.8 kW and 7.5% reduction in electricity load?
39 b) Refer to Table 36 on page 56, (PDF page 70 of 157) which NS Power states shows that the
40 Snapback Effect for commercial TOU participants in the morning and the evening events
41 are statistically significant and explain why the total or overall Snapback Effect is deemed
42 not statistically significant.

- 1 c) How would these results inform how NS Power should design its efforts to increase
2 participation in the TOU program by commercial customers, including small businesses,
3 in the future?
4 d) Please compare and contrast these results for the TOU program to the results for
5 commercial participants in the CPP program illustrated in this report.
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8 **Request IR-6:**

9 Refer to Exhibit N-1, Year 4 Report Results, Stakeholder Engagement and 2026/27 Work Plan,
10 page 3 of 5, and Attachment 1, 2024/2025 Areas of Focus Work Plan Status Update – i.e., 2026/27
11 Work Plan, (PDF pages 1-9) where it shows several Deliverables and Commitments which are
12 listed in the “Status” column as “planned” and in the “Initial Due by/Completed on” column as
13 “Future Technical Session -- to be scheduled in 2026” on pages 3, 4 and 5 of 9. .
14

- 15 a) Since calendar year 2026 is more than half over, when does NS Power plan to hold the
16 future technical session or sessions included in this table?
17 b) How does the current status of recovery from the cyber event impact this schedule?
18 c) If the results for Commercial participants have been shown to be positive, why does NS
19 Power plan to “refrain from active recruitment of new customers during the initial
20 resumption period and maintain focus on a positive customer experience for existing
21 participants” as stated on page 4 of 5?
22