

BEFORE THE NOVA SCOTIA UTILITY AND REVIEW BOARD

In the Matter of the *Public Utilities Act* and
In the Matter of Nova Scotia Power Inc. (NSPI) –
Time-Varying Pricing (TVP) Pilot Program – Year Three Report

(NSUARB M11823)

**Evidence of
Melissa Whited**

**On Behalf of
Counsel to Nova Scotia Utility and Review Board**

September 16, 2024

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Please state your name, title, and employer.**

3 A. My name is Melissa Whited. I am a Vice President at Synapse Energy Economics, Inc.
4 ("Synapse"), located at 485 Massachusetts Avenue, Cambridge, MA 02139, USA.

5 **Q. Please describe Synapse Energy Economics.**

6 A. Synapse is a research and consulting firm specializing in electricity and gas industry
7 regulation, planning, and analysis. Our work covers a range of issues, including economic
8 and technical assessments of demand-side and supply-side energy resources; energy
9 efficiency policies and programs; integrated resource planning; electricity market
10 modeling and assessment; renewable resource technologies and policies; and climate
11 change strategies. Synapse works for a wide range of clients, including attorneys general,
12 offices of consumer advocates, public utility commissions, environmental advocates, the
13 U.S. Environmental Protection Agency, U.S. Department of Energy, U.S. Department of
14 Justice, the Federal Trade Commission, and the National Association of Regulatory
15 Utility Commissioners. Synapse's staff includes over 35 professionals with extensive
16 experience in the electricity industry.

17 **Q. Please summarize your professional and educational experience.**

18 A. I have 13 years of experience in economic research and consulting. At Synapse, I have
19 worked extensively on issues related to utility regulatory models and rate design. I have
20 been an invited speaker in numerous industry conferences, including as a panelist for the
21 National Association of Regulatory Utility Commissioners (NARUC) Subcommittee on
22 Rate Design at the 2021 Winter Policy Summit and the 2018 Annual Meeting.

1 I have sponsored testimony before the Newfoundland and Labrador Board of
2 Commissioners of Public Utilities, the Massachusetts Department of Public Utilities, the
3 Illinois Commerce Commission, the New Hampshire Public Utilities Commission, the
4 Georgia Public Service Commission, the Rhode Island Public Utilities Commission, the
5 Maine Public Utilities Commission, the California Public Utilities Commission, the
6 Hawaii Public Utilities Commission, the Public Service Commission of Utah, the Public
7 Utility Commission of Texas, the Virginia State Corporation Commission, and the
8 Federal Energy Regulatory Commission. I hold a Master of Arts in Agricultural and
9 Applied Economics and a Master of Science in Environment and Resources, both from
10 the University of Wisconsin-Madison. My resume is attached as Appendix A.

11 **Q. Have you previously testified before the Nova Scotia Utility and Review Board?**

12 A. Yes. I testified in Matter Nos. M11621, M11441, M09777, M10176, M10431, M10810,
13 and M10832.

14 **Q. On whose behalf are you providing evidence in this case?**

15 A. I am providing evidence on behalf of Counsel to the Nova Scotia Utility and Review
16 Board (“Board”).

17 **Q. What is the purpose of your evidence?**

18 A. My evidence addresses Nova Scotia Power Inc.’s (“NS Power” or “Company”) Year
19 Three Evaluation Report (“Year Three Report”) for the Time Varying Pricing (TVP)
20 Pilot. In particular, I address the evaluation and performance of Nova Scotia Power’s
21 time-varying pricing tariffs, including customer participation, load reductions, alignment
22 with system needs, and variations in customer response and satisfaction across

1 demographics and heating technologies. I also highlight the need to evaluate whether
2 demand charges may be negatively impacting commercial customer enrollment due to
3 adverse bill impacts from load shifting.

4 **II. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS**

5 **Q. Please describe your conclusions.**

6 A. My conclusions are as follows:

- 7 • Time of Use (TOU) participants reduced demand during peak periods by an
8 average of 7 percent, while Critical Peak Pricing (CPP) participants achieved 27–
9 32 percent reductions. However, the response varied across demographics,
10 particularly the space heating technology used by the customer and income.
 - 11 ○ Electrified customers achieved the highest reductions, while de-electrified
12 and steady non-electric customers increased their peak load.
 - 13 ○ Lower-income customers reduced peak load by 30 percent less than
14 higher-income customers, although the results are not statistically
15 conclusive.
- 16 • CPP events align well with high system need hours (as measured by the top
17 adjusted net load (ANL) hours) but were only called during 26 percent of the Top
18 88 ANL hours. NS Power calls events based on forecasted system margin and
19 balances current needs with future potential events, which may explain why more
20 events were not called.

- 1 • TOU peak hours aligned with only 50 percent of the Top 88 ANL hours.
2 Including weekends would substantially increase alignment. If weekends were
3 included, the TOU periods would capture 71 percent of the Top 88 ANL hours
4 and 81 percent of the Top 20 ANL hours over the last four years.
- 5 • Satisfaction was higher for CPP compared to TOU, with higher dissatisfaction
6 among lower-income customers.
- 7 • Commercial tariffs had limited enrollment, and no statistically significant load
8 shifting results were observed.
- 9 • Demand charges likely deter participation by General Service customers, as
10 shifting load may result in higher demand charges. However, NS Power did not
11 conduct an assessment of the impact of demand charges on TVP customers' bills
12 under load shifting assumption .

13 **Q. What are your recommendations?**

14 A. I recommend that the Board:

- 15 • Direct NS Power to provide a detailed analysis of the correspondence of system
16 margin forecasts and CPP events in future reports. This analysis should report the
17 days with a forecast of low system margin, as well as the forecast system margin
18 for the days on which CPP events were called.
- 19 • Direct NS Power to develop a weekend-inclusive TOU tariff option for
20 implementation during the 2025/26 season.

- 1 • Direct NS Power to explore better methodologies to estimate load reductions for
2 heating groups other than “steady electric.” If it is not feasible to do so, future
3 evaluations should focus on "steady electric" customers.
- 4 • Direct NS Power to include more income brackets in future reports to determine
5 statistically significant differences.
- 6 • Direct NS Power to continue to analyze the differences in satisfaction among
7 tariffs and demographics, and to improve communication around savings
8 expectations.
- 9 • Direct NS Power to assess the potential impact of demand charges on General
10 Service customers’ bills under TVP tariffs. If demand charges are found to have
11 substantial adverse impacts, NS Power should explore alternative rate structures
12 such as time-varying demand charges or volumetric rates.

13 **III. SUMMARY OF DOMESTIC TVP FINDINGS**

14 **Q. Please provide an overview of Nova Scotia Power’s Year Three Report.**

15 A. On July 31, 2024, NS Power filed its TVP 2023/24 Year Three Evaluation Report in
16 accordance with the Board’s directive in Matter M11267.¹ NS Power retained Econoler
17 to analyze the results of Year Three of the pilot program and prepare a report regarding
18 the load reductions achieved by the pilot as part of its Evaluation Measurement &
19 Verification (EM&V) plan, which NS Power filed as Appendix A. In addition, NS Power

¹ M11267 – NSUARB Decision, 308288, pages 6-7. October 17, 2023.

1 filed the results of a survey conducted by Narrative Research (provided as Appendix B)
2 and an overview of marketing and recruitment materials (provided as Appendix C).

3 **Q. What were the primary findings regarding the Domestic TVP tariffs?**

4 A. The EM&V findings indicate that the Domestic TOU and CPP tariffs were relatively
5 popular among customers, with 2,251 customers enrolled in TOU and 922 customers
6 enrolled in CPP for the full duration of the 2023/24 winter season.² Further, these TVP
7 participants achieved significant load reductions during peak periods (for TOU) and peak
8 events (for CPP) in response to price signals. On average, TOU participants reduced their
9 demand during peak hours by 7 percent, while CPP participants reduced their demand
10 during peak events by 27 – 32 percent (depending on the time of day).³ In addition,
11 Domestic TVP participants reduced their overall electricity usage by an average of 360
12 kWh for TOU customers and 476 kWh for CPP customers.⁴

13 **Q. What do these results imply for the Domestic TVP tariffs going forward?**

14 A. While the EM&V results indicate that the tariffs were successful in attracting enrollment
15 and shifting load, more work must be done to ensure that the tariffs are effectively
16 targeting the hours in which the system is most constrained. Further, there is substantial
17 variation across customers in peak load reductions and the degree to which the peak load
18 reductions can be attributed to TVP, as well as variation in the extent to which different

² Year Three Report, Appendix A, page 7 of 64.

³ Year Three Report, Appendix A, page 8 of 64.

⁴ Year Three Report, Appendix A, page 8 of 64.

1 demographics are satisfied with the tariff. These differences should be further evaluated
2 to improve participation and maximize savings through targeted outreach.

3 **IV. DOMESTIC TVP TARIFF ALIGNMENT WITH SYSTEM NEEDS**

4 **CPP Events and System Needs**

5 **Q. How well-aligned are the CPP events with hours in which the system is most**
6 **stressed?**

7 A. The hours in which a CPP event can be called appear well-aligned with system needs,
8 using the highest ANL hours as a proxy for system capacity needs. For the first two
9 winters, CPP events could only be called from 7:00 to 11:00 am, and from 5:00 to 9:00
10 pm on weekdays. Beginning with the third year, the program was modified to allow CPP
11 events to be called for any four-hour window between 6:00 am and 11:00 pm on
12 weekdays, and up to three times on weekends.⁵ The expansion of eligible hours resulted
13 in the CPP period capturing 93 percent of the Top 88 ANL hours for the third year. Thus,
14 the CPP hours appear well-aligned with the timing of the top ANL hours.⁶

15 **Q. Were CPP events called during most of the Top 88 ANL hours?**

16 A. No. CPP events were called only during 23 of the top 88 ANL hours (26%) in 2023-24,⁷
17 despite the fact that they *could* have been called in all but 6 of the top 88 ANL hours (up
18 to the maximum of 72 hours).

⁵ Year Three Report, Appendix A, page 10 of 64.

⁶ Synapse analysis of data provided in NSPI(NSUARB)IR-10.

⁷ Year Three Report, Appendix A, page 35 of 64.

1 **Q. Are you concerned that CPP events aligned with only 26 percent of the Top 88 ANL**
2 **hours?**

3 A. Not necessarily. According to its April 3, 2024, presentation to stakeholders, NS Power
4 calls CPP events when the day-ahead system margin is low (i.e., when the ratio between
5 available capacity and forecast demand is low).⁸ Although one would expect that low
6 system margin would be relatively well-aligned with the Top ANL hours, this may not be
7 true during mild winters (when capacity far exceeds demand), during generation unit
8 outages/derations where available capacity suddenly falls, or due to a lack of imports
9 (also resulting in reduced capacity availability). Because the peak demand for 2023/24
10 was lower than the previous year, NS Power may have had adequate system margin for
11 the majority of the Top 88 ANL hours in 2023/24.

12 In addition, NS Power explains that it “must balance the current system need with the
13 potential future need to call a CPP event. With hindsight it is possible to identify the
14 optimal timing of critical peak events to maximize system benefit across the Winter
15 period, but in real-time it is impossible to foresee future system conditions beyond a
16 couple days, which means it can be necessary to pass on economic opportunities in order
17 to maintain capacity to respond to future low system margin events.”⁹

18 **Q. Is system margin a better metric by which to evaluate when CPP events are being**
19 **called?**

20 A. Yes. In general, CPP events would be expected to be called to address hours with high
21 marginal costs. Because it is necessary to maintain sufficient resources to ensure that load

⁸ M11822, 2024-2025 TVP Application Appendix C Attachment 3 Page 27 of 33.

⁹ NSPI(Synapse)IR-8(c).

1 can be met, periods of low system margin drive system capacity additions and are
2 associated with high marginal costs. As noted above, while the Top ANL hours are most
3 likely also associated with lower system margin, this is not always the case. In its
4 presentation, NS Power explained that the system margin can be low due to low
5 temperatures, low wind generation, generation unit outages/derations, or a lack of
6 imports.¹⁰

7 **Q. Did NS Power assess whether CPP events were well-aligned with periods of low**
8 **system margin?**

9 A. No. Although NS Power previously agreed with Synapse's recommendation that it should
10 provide a more detailed analysis on when and why CPP events are called in the Year
11 Three Report, the Company only explained its criteria for calling CPP events, rather than
12 analyzing the correspondence of low system margin hours to CPP events.

13 **Q. What do you recommend?**

14 A. I recommend that the Company provide an analysis of the day-ahead projection of system
15 margin and CPP events. If historical system margin forecast data are available, this
16 analysis should be provided for 2023/24. If historical system margin forecast data are not
17 available, the Company should conduct this analysis for the upcoming season and
18 provide its analysis in its next report.

¹⁰ M11822, 2024-2025 TVP Application Appendix C Attachment 3 Page 27 of 33.

1 **TOU Hours and System Needs**

2 **Q. Are TOU peak hours well-aligned with system needs?**

3 A. Not particularly, at least not when using the top ANL hours as the relevant metric. Over
4 the past four winter seasons, the TOU on-peak periods have captured only 50 percent of
5 the Top 88 ANL hours and 51 percent to the Top 20 ANL hours.¹¹ This is largely because
6 the TOU on-peak periods exclude weekends. If weekends were included, the TOU
7 periods would capture 71 percent of the Top 88 ANL hours and 81 percent of the Top 20
8 ANL hours over the last four years.¹²

9 **Q. What do you recommend regarding the TOU peak periods?**

10 A. I recommend that NS Power develop an additional TOU tariff that also applies to
11 weekends for implementation during the 2025/26 season. The development of a TOU rate
12 that applies during weekends is consistent with Synapse’s recommendation in Matter
13 M11267¹³ and NS Power’s agreement to hold stakeholder discussions in the Fall of 2023
14 regarding testing a TOU rate with peak hours during weekends.¹⁴

15 To date, NS Power has not proposed a TOU rate with peak hours on weekends, but it has
16 conducted surveys regarding customer acceptance of such a rate. Those surveys indicate
17 that approximately 50 percent of current TOU customers would likely remain on the
18 TOU plan if weekends were included as peak periods.¹⁵ While these results suggest that a

¹¹ Synapse analysis of data provided in NSPI(NSUARB)IR-10.

¹² Synapse analysis of data provided in NSPI(NSUARB)IR-10.

¹³ Evidence of Eric Borden on Behalf of Counsel to the Nova Scotia Utility and Review Board. M11267. September 25, 2023.

¹⁴ M11267 – NSUARB Decision, 308288, page 5. October 17, 2023.

¹⁵ 2024-2025 TVP Application Appendix C Attachment 6 Page 91 of 91.

1 TOU tariff that includes weekends may not be as popular as the current TOU tariff, any
2 enrollment level in a TOU tariff that includes weekends enhance the Company’s ability
3 to address system constraints, thereby reducing the need and associated costs of adding
4 additional capacity to the system. This topic should be a priority for stakeholder sessions
5 in 2025 to ensure that a tariff can be developed in time to be piloted for the winter of
6 2025/26.

7 **V. VARIATION IN DOMESTIC CUSTOMER RESPONSE AND SATISFACTION**

8 **Variation in Customer Response and Robustness of Evaluation Methodology**

9 **Q. How do the load shifting results vary based on customer type?**

10 A. The EM&V report shows that the space heating technology used by participants greatly
11 influences the load reduction results for TOU participants.¹⁶ In particular, the
12 “electrified” group (customers who had non-electric space heating in the pre-pilot period
13 and then electric heating in the pilot period) shows extremely high peak load reductions,
14 while the “de-electrified” group (customers who converted from electric space heating to
15 non-electric space heating) and “steady non-electric” group (customers with non-electric
16 space heating in both the pre-pilot and pilot periods) show *increased* load during on-peak
17 hours. These results are summarized in Table 1.

¹⁶ Year Three Report, Appendix A, page 8 of 64.

1 **Table 1. Load reductions and participation by technology type**

	Morning Peak					Evening Peak				
	Overall	Steady Electric	Electrified	De-electrified	Steady Non-Electric	Overall	Steady Electric	Electrified	De-electrified	Steady Non-Electric
Avg Load Reduction (kW)	0.15	0.16	0.33	-0.11	-0.05	0.15	0.19	0.32	-0.14	-0.06
Avg Load Reduction (%)	7%	7%	36%	-5%	-5%	7%	7%	27%	-6%	-5%
Participants by Heating Type	100%	61%	11%	11%	16%	100%	61%	11%	11%	16%

2

3 **Q. What accounts for the large differences in load shifting across space heating**
4 **technologies?**

5 A. NS Power notes that “the ‘electrified’ and ‘de-electrified’ groups, as well as the ‘steady
6 non-electric’ group, show changes in electricity usage patterns that are not only the result
7 of TVP and that could not be eliminated through the usage of control groups. The “steady
8 electric” group is the only group where the results of TVP are not visibly influenced by
9 external factors.”¹⁷ This inability to control for external factors through the use of control
10 groups likely explains much of the variation in load reductions across the various space
11 heating technology types.

12 For example, while the de-electrified group shows an *increase* in average peak load of
13 0.11 and 0.14 kW for morning and evening peak periods when using a control group, this
14 same group shows a load *reduction* of 0.14 and 0.13 during the morning and peak periods
15 when compared strictly to themselves in the pre-pilot period.

¹⁷ NSPI(Synapse)IR-2(b).

1 **Q. What does the inability to adequately control for external factors imply regarding**
2 **the interpretation of the results?**

3 A. Because of the inability to fully control for external factors, it is difficult to interpret the
4 pilot results for customers who are not in the “steady electric” group. I therefore
5 recommend that the “steady electric” results be the primary focus of the evaluation until
6 greater certainty can be established regarding the results for the other space heating
7 technology groups.

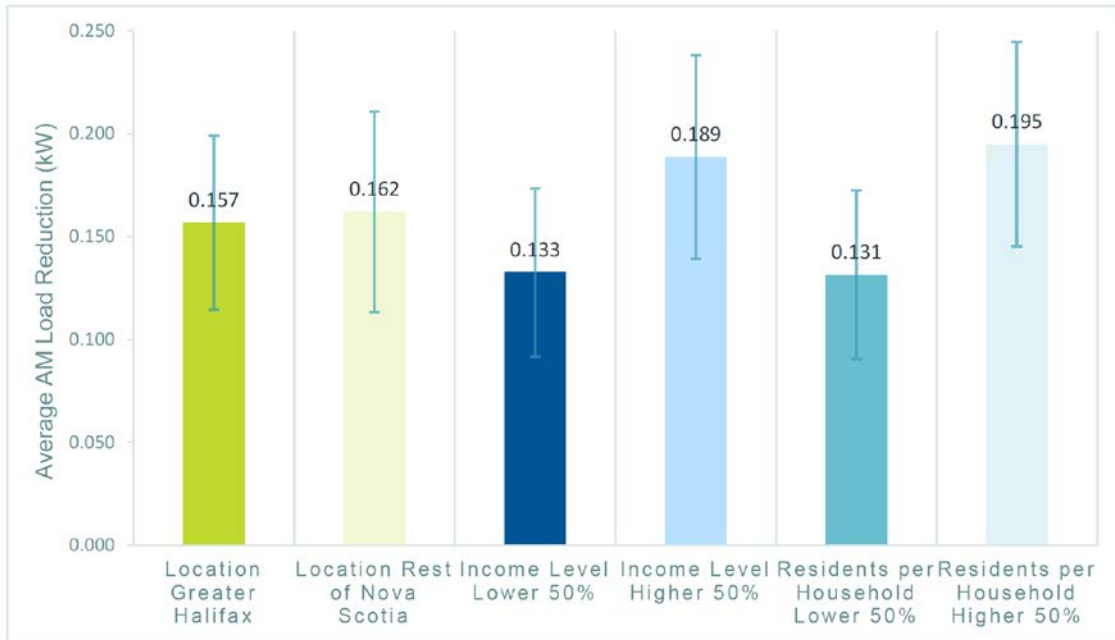
8 For this evaluation period, the overall results do not change substantially if only the
9 results of the “steady electric” group are considered. In fact, the average results for all
10 groups in the pilot are nearly identical to the results for only the “steady electric” group,
11 in part because the “steady electric” group represents 61 percent of participants in the
12 pilot.

13 **Q. Given that the majority of pilot participants are in the “steady electric” group, do**
14 **you recommend alternative methodologies be explored to develop better estimates of**
15 **peak load reductions for other heating technology groups?**

16 A. Yes, I recommend that the Company explore alternative methodologies to enable it to
17 better estimate the average peak load reductions for other heating technology groups, as
18 differences in load reductions may have important implications for marketing and
19 outreach. For example, if the average peak load reductions of “electrified” customers are
20 really more than twice as great as other customers, then it might make sense for NS
21 Power or EfficiencyOne to target these customers through additional channels (such as
22 through heat pump installers or heat pump rebate applications) or through more targeted
23 marketing materials.

1 **Q. Are there any other important differences in customer average peak load**
2 **reductions?**

3 A. Yes. Lower-income customers reduce peak load to a lesser extent than higher-income
4 customers, as shown in the figure reproduced from the EM&V report below.



5
6 Although this figure indicates that customers with incomes lower than the median
7 reduced their peak load by 30 percent less than customers with higher-than-median
8 incomes, the results are inconclusive because of the large error bars. The large error bars
9 could be the result of each group containing a large number of customers with incomes
10 close to the median. Because of this, I recommend that the next EM&V report segment
11 customers into a larger number of income brackets in order to determine whether there

1 are any statistically significant differences in customer response across a wider array of
2 income groups.¹⁸

3 **Q. Why is it important to understand differences in customer response across income**
4 **groups?**

5 A. In addition to reducing peak demand on the system (thereby reducing system costs), TVP
6 offerings also enable customers to better control their electricity bills by changing when
7 they use certain appliances. From an equity perspective, it is important that lower-income
8 customers are able to benefit from TVP as well as higher-income customers. To facilitate
9 this outcome, it may be appropriate to offer lower-income customers additional tools
10 (such as programmable thermostats) for shifting load. However, we must first understand
11 whether there are differences in customer response across income groups and the reason
12 for these differences.

13 **Differences in Customer Satisfaction**

14 **Q. What are the primary differences in customer satisfaction?**

15 A. Overall, approximately two-thirds of TVP participants reported being satisfied with the
16 programs, with slightly higher levels of satisfaction for CPP over TOU. However, it is
17 notable that 6 percent TOU customers reported being “completely dissatisfied” with the
18 TOU program (a score of 1 out of 10) while only 3 percent of CPP customers reported
19 being “completely dissatisfied.”¹⁹

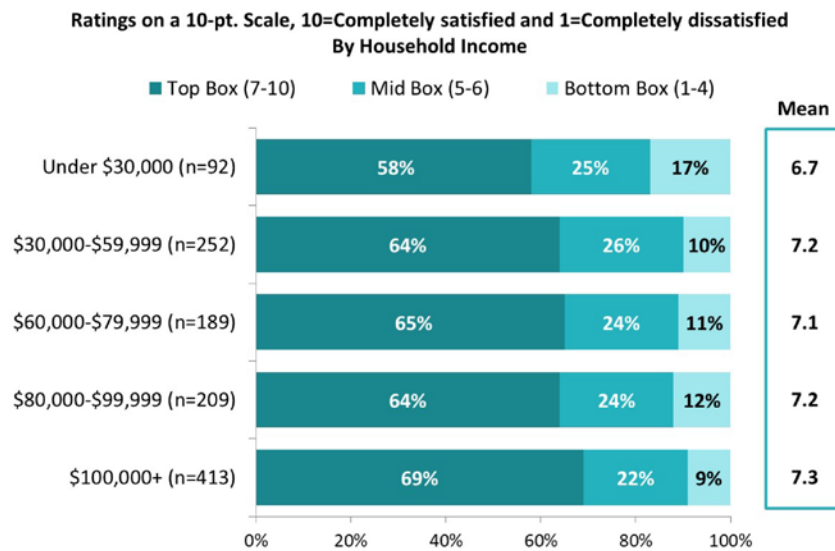
¹⁸ Although creating more income groups will reduce the number of customers in each group, potentially increasing the error bars, it should aid in determining differences across income groups that are not adjacent to one another.

¹⁹ Year Three Report, Appendix B, page 12 of 65.

1 One potential reason for customer dissatisfaction with the TOU rate is that TOU
 2 customers tend to experience bill *increases* of 19 percent in the winter relative to the
 3 standard offer tariff, while CPP customers do not tend to experience bill increases.²⁰ This
 4 sentiment is captured in the customer feedback that “Winter electrical bills are extremely
 5 high.”²¹ In response the Company states that it “is incorporating more language around
 6 summer savings and better clarity on timing and expectations of being on the rate.”²²

7 In addition, satisfaction with the TOU tariff appears to be correlated with income, with 69
 8 percent of customers in the highest income bracket (\$100,000+) reporting being satisfied,
 9 while only 58 percent of customers in the lowest income bracket (\$30,000) reporting
 10 being satisfied, as shown in the figure below.²³

11 **Figure 1. Customer Satisfaction with TVP Offering**



12
13 *Source: Year Three Report, Appendix B, page 14.*

²⁰ Year Three Report, Appendix A, page 9 of 64.
²¹ Year Three Report, Appendix B, page 61 of 65.
²² NSPI (Synapse) IR-6.
²³ Year Three Report, Appendix B, page 14 of 65.

1 **Q. What do you recommend regarding these differences in customer satisfaction?**

2 A. I recommend that the Company continue to analyze the reasons why customer
3 satisfaction varies across TVP offerings and income groups and discuss its findings with
4 the stakeholder group to determine whether any interventions are warranted. In addition, I
5 support the Company providing additional language around when customers can expect
6 to see savings (i.e., that absent load shifting, customers will have lower bills in the
7 summer and have higher bills in the winter relative to the standard tariff) and recommend
8 that the Company share such draft language with the stakeholder group for discussion.

9 **VI. SUMMARY OF COMMERCIAL TVP FINDINGS**

10 **Q. Please summarize the findings related to the Commercial TVP tariffs.**

11 A. In contrast to the Domestic TVP tariffs, the Commercial TVP tariffs were not popular
12 and had limited enrollment, despite additional marketing and outreach. Because of this
13 limited enrollment, the EM&V analysis did not produce statistically significant results
14 regarding load shifting, energy consumption, or bill impacts.²⁴

15 **Q. What is the reason that the TVP tariffs are not attractive to Commercial customers?**

16 A. There are likely many reasons, as there is great heterogeneity among these customers.²⁵
17 The Company has also previously found that Commercial customers report that they are
18 unable to shift their energy during peak periods.²⁶ However, the existence of a demand
19 charge that applies during all hours of the day is another key reason why Commercial

²⁴ Year Three Report, Appendix A, page 9 of 64.

²⁵ Year Three Report, Appendix A, page 42 of 64.

²⁶ M11267 -- NSPI (NSUARB) IR-4.

1 customers may find the TVP tariffs unattractive. Specifically, customers may be
2 concerned that by shifting load to off-peak hours, they will create a new, higher peak
3 demand, resulting in higher demand charges on their bills.

4 **Q. Has NS Power evaluated the potential impact of demand charges on General Service**
5 **customers' bills?**

6 A. No. The Consensus Agreement in matter M09777 specified that the interim and final
7 reports will address the “impacts of demand charges for General Service customers on
8 TVP rates.”²⁷ In addition, in both matter M10703 and M11267, the Board directed NS
9 Power to provide an assessment of the impact of demand charges on General Service
10 customers on TVP rates.²⁸ NS Power has not done so.

11 **Q. Has NS Power conducted any analysis or taken any steps to address the demand**
12 **charge's disincentive to enroll in TVP tariffs?**

13 A. Yes, the Company has conducted several relevant analyses and developed a Multi Unit
14 Residential Building (MURB) tariff without a demand charge. Specifically:

15 1) NS Power conducted an analysis of structural winners in each class, including
16 General Service customers (who have a demand charge). This analysis found that
17 more than half of General Service customers would be structural winners,²⁹ but did
18 not evaluate the impact of load shifting on the magnitude of the demand charge a
19 customer would likely face.

²⁷ M09777 – NSUARB Decision. June 22, 2021. Schedule “A” – Terms of Consensus, page 5 of 7.

²⁸ M11267 – NSUARB Decision, 308288. October 17, 2023, page 6.

²⁹ M11822 TVP 2024-25 Application, Appendix C, Attachment 1, July 31, 2024, pages 40-41.

1 2) The Company presented the results of the Brattle Group’s survey of TVP for small
2 business customers.³⁰ This survey found that half of TVP offerings in their survey did
3 not include a demand charge. Of those that included a demand charge, 59 percent of
4 the demand charges were time-varying (i.e., only applied to certain hours of the day.)

5 3) The Company has fulfilled the “Additional Commitment” in the Consensus
6 Agreement to “work with Polycorp to develop a pilot version of a General Demand
7 TOU tariff applicable to Multi-Unit Residential Buildings that has energy charges
8 only (i.e. no demand charge).”³¹

9 While these efforts are welcome, they do not fulfill NS Power’s obligation to provide an
10 assessment of the impacts of demand charges for General Service customers on TVP
11 rates.

12 **Q. What would an assessment of the impact of demand charges for General Service**
13 **customers on TVP rates entail?**

14 A. This assessment should evaluate to what extent customer bills are likely to increase if
15 they shift load from on-peak hours to off-peak hours. To conduct this analysis, NS Power
16 could assume some pre-determined levels of peak load reductions (e.g., 10 percent, 20
17 percent, and 30 percent) and then add half of this load to the two hours preceding each
18 peak period and the two hours following the peak period. NS Power would then compare

³⁰ M11822 TVP 2024-25 Application, Appendix C, Attachment 6, July 31, 2024, pages 13-23.

³¹ M09777 – NSUAR Decision. June 22, 2021. Schedule “A” – Terms of Consensus, page 6 of 7.

1 the customer's bills under the standard tariff and the TOU and CPP tariffs to determine
2 whether the customer's bills would increase due to load shifting and the demand charge.

3 **Q. What do you recommend?**

4 A. I recommend that NS Power conduct the assessment described above for either all
5 General Service customers or a large sample of General Service customers and present
6 the results to the stakeholder group in 2025. If the presence of a demand charge is likely
7 to increase TVP customers' bills, NS Power should develop alternative rates for General
8 Service customers. Such rates could include a time-varying demand charge (i.e., where
9 the demand charge would only apply during on-peak periods); a fully volumetric rate; or
10 other options.

11 **Q. Does this conclude your evidence?**

12 A. Yes, it does.