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Request IR-1:

Reference: Exhibit N-1, p. 41.

(a) Please provide the system-coincident unmanaged peak impact per vehicle for 2023 in the same format as the response in Exh. N-2, Matter M11108, CA RIR-3.

(b) Please provide any assumptions or forecast of managed charging participation rates, by vehicle type, that have been used in the development of Figures 28 and 29.

(c) According to Exh. N-2, Matter No. M11689, CA RIR-4(b), “counterfactual” unmanaged charging data indicates only 0.4 kW/vehicle, with the measured contribution to peak being 0.24 kW/vehicle. Please explain the 0.6 avg kW/vehicle on peak value in Figure 28, taking into consideration (i) the cited results from the Smart Grid Nova Scotia Final Report, (ii) NS Power’s assumptions regarding anticipated participation rates for managed charging programs, and (iii) any changes to anticipated peak demand hours.

(d) Please explain the 0.7 kW/vehicle and 1.2 kW/vehicle columns in the two Figure 29 tables. If the difference between these two values is explained by the 0.5 kW/vehicle maximum non-coincidence residential peak value discussed in the text, please explain how this value is being used, i.e., what residential peak estimate is included in each column and what that value is intended to represent.

Response IR-1:

(a) 2023 values can be found in M11689, Exhibit N-2, CA RIR-4(b).

(b) Please refer to Synapse IR-9 part (h) for discussion of assumptions around managed charging in the 2025 Load Forecast.

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- 1 (c) The 0.6 kW/vehicle on peak value for LDVs is the combined peak impact by charging type,
2 which includes the following categories: at home, workplace, Public L2, and Public DCFC.
3 Please refer to Synapse IR-9 Attachment 1 – 2025 EV Load Forecast tab for a full
4 breakdown of the values used. This value differs from those cited in the SGNS final report
5 as the SGNS report only represented the at home charging portion for a smaller sample of
6 vehicles. There are no specific assumptions regarding participation rates for managed
7 charging programs. There are no considerations for possible changes to peak demand hours
8 in the forecast.
9
- 10 (d) The 0.7 kW/vehicle and 1.2 kW/vehicle values in Figure 29 represent the average peak
11 impact across all EV types (LDV, MDV, and HDV), for managed and unmanaged
12 scenarios, respectively. The 0.5 kW/vehicle value reflects the *non-coincident peak demand*
13 associated with unmanaged LDV at-home charging, while the 0.39 kW/vehicle figure
14 corresponds to the *coincident peak demand* for managed LDV at-home charging. For a
15 detailed breakdown of these assumptions and calculations, please refer to Synapse IR-9,
16 Attachment 1 (2025 EV Load Forecast tab).

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Request IR-2:

Reference: Exhibit N-1, Section 10.0.

(a) Please provide a table summarizing NS Power's forecasts for demand reduction and actual demand reduction due to time-varying pricing in the following format.

Load Forecast Report:	2021	2022	2023	2024	2025	Actual Demand Reduction
Year						
2021						
2022						
2023						
2024						
2025						
2026						n/a
2027						n/a
2028						n/a
2029						n/a
2030						n/a
2031						n/a
2032						n/a
2033						n/a
2034						n/a
2035						n/a

(b) Please provide a brief explanation of the basis for the actual demand reduction amount in the response to part (a).

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- 1 **(c) Please provide NS Power’s current estimate for when it will fulfill the commitment**
2 **that its investment in AMI technology would result in a reduction in system peak**
3 **demand, and thus reduce the amount of necessary system peaking capacity.**
4
- 5 **(d) Considering the top ten peak event periods during the 2023-2024 winter, where an**
6 **event is defined a morning, mid-day, evening, or full-day period: Please identify the**
7 **peak hour associated with each event period and whether that hour occurred on a**
8 **weekday or weekend and during a peak TOU period or not.**
9
- 10 **(e) Please provide the projected reduction in system peak associated with TVP rates, the**
11 **number of customers required to achieve those savings, and the associated peak**
12 **impact per customer. In your response, please provide support for all data and**
13 **assumptions.**
14
- 15 **(f) Please summarize the plans for the TVP Pilot and the longer-term plan for TVP tariff**
16 **deployment.**
17
- 18 **(g) Please identify what additional data and analysis is required by NS Power to fully**
19 **understand the performance of TVP rates and achieve NS Power’s goals for this**
20 **program**
21

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Response IR-2:

(a) Please see the table below.

Load Forecast Report:	2021 (MW)	2022 (MW)	2023 (MW)	2024 (MW)	2025 (MW)	Actual Demand Reduction from TVP
Year						
2021	0					0.0
2022	4	0				0.4
2023	12	4	4			0.5
2024	24	12	12	1	1	1.3
2025	36	24	24	4	4	3.7 ¹
2026	39	36	36	12	12	n/a
2027	39	39	39	24	24	n/a
2028	39	39	39	36	36	n/a
2029	38	39	39	39	39	n/a
2030	38	38	38	39	39	n/a
2031	37	38	38	39	39	n/a
2032		37	37	38	38	n/a
2033			37	38	38	n/a
2034				37	37	n/a
2035					37	n/a

(b) The actual demand response is calculated by multiplying the average impact per customer for morning and evening peak periods and critical peak events by the respective TOU and

¹ As the 2024/25 TVP evaluation report has not finished being compiled, the 2025 actual demand reduction is calculated based on approximate enrolment statistics saved prior to the cyber incident multiplied by the 2023/24 load impact per customer, as provided in the 2023/24 (Year Three) TVP Evaluation Report (M11823).

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CPP participation recorded in each TVP Season (as reported in the Company's annual Evaluation Reports) while accounting for line losses during peak periods.

(c) System peak demand reduction has already been achieved by AMI technology-enabled TVP rates by an estimated 3.7 MW in the 2024/2025 winter season. Growth in peak reductions enabled by AMI technology is expected to continue as programs scale.

(d) NS Power understands the question to be referring to the top 10 peak hours during the 2023 – 2024 winter. Using the definition of morning (before 12:00 PM), mid-day (12:00-4:00 PM), and evening (after 4:00 PM), the following table has been prepared using publicly available OASIS data² for the period November 2023 to March 2024. TOU peak periods occur during non-holiday weekdays from 7:00-11:00 AM and 5:00 – -9:00 PM from November 1 to March 31 of each TVP Season, as per the tariff.³

Rank	Date	Type	Weekday/ Weekend	Hour Ending	Load (MW)	TOU Period
1	2/21/2024	Morning	Weekday	8:00 AM	2,088	Peak
2	12/22/2023	Evening	Weekday	6:00 PM	2,041	Peak
3	2/20/2024	Morning	Weekday	8:00 AM	2,029	Peak
4	1/29/2024	Evening	Weekday	6:00 PM	2,015	Peak
5	3/1/2024	Morning	Weekday	8:00 AM	2,010	Peak
6	1/24/2024	Morning	Weekday	9:00 AM	2,001	Peak
7	12/22/2023	Morning	Weekday	12:00 PM	1,997	Off-Peak
8	1/8/2024	Evening	Weekday	6:00 PM	1,989	Peak
9	1/6/2024	Evening	Weekend	6:00 PM	1,988	Off-Peak
10	1/18/2024	Evening	Weekday	6:00 PM	1,987	Peak

*December 22, 2023, contains two of the top ten hours in the same day.

² Nova Scotia Power. (2025). *Hourly Total Net Nova Scotia Load*. OASIS Monthly Reports.

<https://www.nspower.ca/oasis/monthly-reports/hourly-total-net-nova-scotia-load>

³ Nova Scotia Power. (2025). *Tariff Book (January 6, 2025)*. Approved by the Nova Scotia Utility and Review Board pursuant to the Public Utilities Act. Nova Scotia Power, Schedule D, Pages 11 – 13.

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(e) Please see the table below.

Step	Description	Amount	Reference
A	Projected reduction in system peak associated with TVP rates in 2035	33 MW	2025 Load Forecast Figure 60
B	Winter 2023/24 Peak Reduction	1.3 MW	CA IR-02 (a)
C	Winter 2023/24 Domestic TOU	2,241 participants	2023/2024 TVP EM&V
D	Winter 2023/2024 Domestic CPP	922 participants	2023/2024 TVP EM&V
E	Average Peak Load Reduction per TVP Participant	0.411 kW	$(B*1000)/(C+D)$
F	TVP participants required to achieve targeted peak reductions	80,292 participants	$A/(E*1000)$

(f) The TVP pilot is being developed collaboratively with TVP stakeholders as part of an ongoing process to support peak reduction targets aligned with the Evergreen Integrated Resource Plan. The pilot is designed to generate insights that inform both current and future pilot rates, with the goal of optimizing peak reductions in a cost-effective manner. In the near term, the Company intends to continue reviewing, assessing, and evaluating the effectiveness of the Tariffs included in the pilot. This evaluation will help determine the appropriate timing and approach for potentially migrating some, or all, of these Tariffs to standard offer, opt-in options for customers. As for the longer-term deployment of TVP tariffs, this work is progressing through the Company's pricing innovation process and ongoing stakeholder engagement. The Company is actively working to finalize its proposed approach for the upcoming TVP season (2025/26), which ultimately will reflect learnings from the pilot and broader strategic planning.

(g) While no specific data types or analyses have been identified as "required," the evaluation and assessment of TVP Tariff performance has continuously been refined with input from stakeholders (e.g. structural winners analysis, rate design scorecard, introduction of MURB TOU Tariff evaluation metrics, etc.). Through the annual TVP Evaluation, Measurement and Verification (EM&V) Report proceedings, and the Company's ongoing stakeholder

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1 engagement through annual Work Plans and Technical Sessions, NS Power has established
2 a mechanism to incorporate feedback which ensures a robust, collaborative and fulsome
3 understanding of the performance of the TVP Tariffs.

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Request IR-3:

Reference: Exhibit N-1, Section 10.4.

- (a) Please provide the data supporting Figures 71 and 72.
- (b) If available, please provide the class load data for 2024 on an hourly basis for the entire year. If not available, please explain.
- (c) Please provide a comparison of NS Power's current forecast of system peak (aggregate method) with a forecast of system peak using the data supporting Figures 71 and 72 and a class-specific growth rate. By class-specific growth rate, ideally this would be a class-specific peak demand growth rate, but if this is not available, then please use the class-specific customer growth rate.
- (d) Please discuss the pros and cons of switching from an aggregate method to a class-specific method as potentially illustrated by the response to part (c). Please explain whether this is what is meant by the statement that "NS Power has been exploring ways of using interval data to understand peak at the class level from a bottom-up perspective."

Response IR-3:

- (a) Please refer to Confidential Attachment 1, peak day tab for Figure 71 and monthly tab for Figure 72.
- (b) Please refer to Confidential Attachment 1, scaled class load shapes tab.
- (c) No peak forecast has been developed based on class-specific growth rates.

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1 (d) The formulation of NS Power's peak model is outlined in detail in Section 10.0 and
2 Appendix B. As explained, the model relates monthly peak demand (excluding large
3 customer contribution) to heating, cooling, and base load requirements, as well as average
4 daily wind. This allows for the impact of changing heating and cooling requirements, which
5 drive the peak in most months, along with changes in load associated with other end uses
6 (e.g. EVs), to be reflected in the peak forecast. This widely used peak forecasting
7 methodology results in an excellent model fit (Adjusted R-Squared = 0.982) and relatively
8 low forecast error (Mean Absolute Percentage Error (MAPE) = 2.35 %). However, NS
9 Power is always exploring alternative methods to improve forecast accuracy further.

REDACTED (CONFIDENTIAL INFORMATION REMOVED)

**2025 Load Forecast Report CA IR-3 Confidential
Attachment 1 has been removed due to confidentiality.**