

2025 Annual Performance Standards Report (NSEB M12784)
NSPI Responses to NSEB Information Requests

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Request IR-1:

Please provide data on all outage events in 2025, as an Excel file, including the same information provided for planned outages in Appendix K, and noting which outages were planned and which were unplanned.

Response IR-1:

Please refer to Attachment 1.

2025 Annual Performance Standards Report IR-1
Attachment 1 has been filed electronically.

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Request IR-2:

(a) How does the utility currently evaluate transmission system reliability to supply electrical energy to major load regions of the utility?

(b) Has the utility recently performed any analysis to evaluate the transmission system reliability to supply electrical energy to major load regions of the utility?

(i) If yes, please provide the report.

(ii) If not, why not?

Response IR-2:

(a) With respect to NS Power's transmission system impact on Performance Standards reliability metrics, customer outage events resulting from interruptions originating on the transmission system (including substations) are coded as Loss of Supply. The contribution to reliability performance (SAIFI and SAIDI) can be analysed as part of NS Power's risk-based decision-making process to drive interventions as appropriate. In addition to Performance Standards, NS Power also reports on bulk power system interruptions as part of its NERC compliance activities.

(b) As discussed in part (a) above, NS Power includes the impact to customer reliability due to interruptions originating on the Company's transmission system as part of its overall reliability analysis process. The most recent report including a review of these impacts would be the 2025 Performance Standards report.

(i-ii) N/A.

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Request IR-3:

Has the utility conducted any statistical analysis over the years to demonstrate that, for the given level of investment, it has increased customer satisfaction, decreased operating costs, and provided a predictable and consistent level of reliability?

(a) If yes, please provide a summary of that analysis for each of the items noted, along with the detailed analysis reports.

(b) If not, please provide comments on each of the items noted, along with the justification for why they are not required.

Response IR-3:

No. NS Power has not completed such an analysis as described.

(a) N/A

(b) NS Power has not conducted formal statistical analyses (such as correlation analysis or multivariate regression) to quantitatively attribute specific changes in customer satisfaction, operating costs, or reliability performance directly to given levels of investment. Comments and justification for each item are provided below:

- Customer Satisfaction

- The multifaceted nature of customer satisfaction makes it challenging to isolate and statistically attribute improvements specifically to reliability capital investments. NS Power focuses its measurement efforts on direct, observable reliability performance metrics (SAIDI, SAIFI, CKAIDI, CKAIFI) that directly correlate with customer experience of service

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continuity. Regardless, NS Power engages with customers and stakeholders through community meetings, elected official meetings, and reliability roadshows to address customer reliability concerns.

- Decreased Operating Costs

- NS Power has not performed comprehensive statistical analysis demonstrating that reliability investments have systematically decreased overall operating costs over time.

- While individual capital projects may include estimates of avoided costs (such as the FLISR Implementation project's estimated \$16,500 in annual avoided operational costs from reduced outage duration), NS Power does not maintain a systematic statistical program aggregating these estimates across all reliability investments to demonstrate enterprise-wide operating cost reductions.

- The primary objective is reliability improvement, not cost reduction. The Five-Year Reliability Plan is driven by goals to improve customer reliability (reducing Performance Standards SAIDI by 20 percent from the 2019-2023 five-year average and achieving Performance Standards SAIFI of 2.05), rather than reducing operating expenses.

- Many reliability investments aim to prevent future costs (e.g., avoided storm restoration expenses, reduced equipment failures, minimized emergency repairs) rather than reduce current operating budgets. The counterfactual—what costs would have been incurred in the future without making the investment—is difficult, if not impossible, to establish with precision.

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- 1 • Additionally, the Five-Year Reliability Plan explicitly increases vegetation
2 management operating expenditures (an additional \$45 million annually in
3 distribution and transmission tree trimming and right-of-way work planned
4 for 2026), demonstrating that improved reliability performance sometimes
5 requires higher, not lower, operating costs.
6
- 7 • Finally, external factors dominate variability in operating costs: Operating
8 cost trends are influenced by factors including labor costs, contractor
9 availability, fuel prices, material costs, inflation, and the severity and
10 frequency of weather events—many of which are out of NS Power’s
11 control, are not necessarily possible to predict, and can overwhelm cost
12 savings attributable to capital investments
13
- 14 • Providing a Predictable and Consistent Level of Reliability
15
- 16 • NS Power has not performed formal statistical attribution analysis to
17 demonstrate that specific investment levels can result in predictable and
18 consistent reliability improvements.
19
- 20 • As previously disclosed in NS Power's response to NSEB IR-4 regarding
21 the Five-Year Reliability Plan alignment (referenced in the conversation
22 summary), NS Power has not performed formal correlation or attribution
23 analysis to statistically link individual reliability investments to
24 SAIDI/SAIFI improvements. The Company relies on:
25
 - 26 • Year-over-year outage cause comparisons
 - 27 • Circuit-level risk rating (leading and lagging indicators of condition)
 - 28 • Qualitative assessment of directional consistency between
 investment programs and performance trends

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- 1 • Reliability performance is influenced by highly interconnected and
2 confounding variables such as:
 - 3 • Weather variability
 - 4 • External factors
 - 5 • Lagging and cumulative effects of investment
 - 6 • Multi-year investment planning
- 7
- 8 • In lieu of formal statistical attribution analysis, NS Power employs a risk-
9 based asset management framework that provides confidence in investment
10 effectiveness. Attempting to develop statistical models (e.g., regression of
11 SAIDI against capital spending) without adequately controlling for all
12 variables could produce unfounded correlations that misrepresent causation,
13 potentially leading to misguided investment decisions.

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Request IR-4:

The Board understands that the System Average Interruption Frequency Index (SAIFI) denominator is the number of customers. There has been an increase of 32,136 customers from 2021 to 2025. Out of the total 32,136 customers added since 2021, nearly 48% are in the metro region which could be considered high customer density region compared to the utility's other operating regions.

(a) How does the utility determine and measure actual performance when the numerator and/or denominator changes year over year?

(b) Please provide the percent change in SAIFI for each year from 2021 to 2025.

Response IR-4:

(a) Consistent with their design, SAIFI and SAIDI (as well as CKAIFI and CKAIDI) are both normalized metrics to account for differences in customer volumes and aid comparison between performance in different areas, month-by-month, year-by-year, or among different utilities. As both metrics are a representation of the customer experience of an average customer, normalizing by the total number of customers allow for more "Apples-to-Apples" comparison should customer counts change over time, all else being equal.

(b) The annual Performance Standards SAIFI and year-over-year percentage change for the years 2021 to 2025 is provided in the table below.

Year	PS SAIFI	% Change in PS SAIFI
2020	2.05	-
2021	2.28	+11%
2022	2.19	-4%
2023	2.18	-<1%

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Year	PS SAIFI	% Change in PS SAIFI
2024	1.97	-10%
2025	1.57	-20%

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Request IR-5:

Since 2020 through 2025, please provide the total number of planned outages along with the total outage duration.

Response IR-5:

The total number of planned outages and associated Customer Hours of Interruption (CHI) for the years 2020 to 2025 is provided in the table below.

The increase in planned outages is driven by an increase in work focused on reliability, and on work requested by customers. All planned outages are carefully reviewed to ensure work can be completed safely while minimizing impacts to customers.

Year	Total Events	Total CHI
2020	458	171,013
2021	532	194,248
2022	466	333,481
2023	1951	686,609
2024	1662	588,857
2025	1749	618,413

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Request IR-6:

(a) Did any of the opt-out customers receive an estimated bill in 2025?

(i) If so, please explain why actual manual meter readings were not obtained.

(ii) If so, how many opt-out customers received estimated bills and how many estimated bills did those customers receive?

Response IR-6:

(a) Yes, opt-out customers received estimated bills in some periods in 2025.

i. NS Power's meter reading capacity was re-deployed during the period following the cyber incident in a way to better balance the overall customer experience with regard to true reads. In the period of May-December, ~49 percent of bills issued to opt-out customers were estimated, while ~56 percent of all bills were estimated during this time.

ii. A total of 17,315 distinct opt-out accounts received an estimated bill in the period May-December 2025. On average, 5 bills were issued to opt-out customers in this period, with ~2.5 being estimated.

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Request IR-7:

Page 9 of the report notes the following:

NS Power is already seeing positive results from the \$206 million invested in the first year of the reliability plan. There was a 19 percent reduction in outages due to trees coming into contact with power lines in 2025 compared to 2024 and an 18 percent reduction in outages due to equipment failures...

Since 2021, for primary overhead distribution lines, please provide the yearly data for each of NS Power's four operating regions (West, Metro, Northeast, and Cape Breton), where applicable, in an Excel sheet:

(a) A breakdown of the number of customers.

(b) A breakdown of total primary overhead distribution lines, including voltage level, length in kilometers, number of customers served, number of outages experienced, and total customer hours of interruptions.

(c) For the distribution circuits identified in b), please provide a percentage breakdown of the outage causes, money spent on reliability projects, along with a breakdown of those projects by categories within the utility's control, such as replacing defective equipment and vegetation management.

(d) For the distribution lines identified in b), please indicate what percentage of the line does not require any vegetation management.

(i) Please provide the percentage breakdown of outage causes, along with the number of customers served, the number of outages experienced, and the total customer hours of interruptions, reported separately for distribution lines that require vegetation management and those that do not.

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1 (e) A breakdown of total substations, including primary and secondary voltage level,
2 number of customers served, number of outages experienced, and total customer
3 hours of interruptions.

4
5 (f) For the substations identified in b), please provide a percentage breakdown of the
6 outage causes, money spent on reliability projects, along with a breakdown of those
7 projects by categories within the utility's control such equipment replacement,
8 protection and control system improvements and redundant feeds.

9
10 (g) Residential and business customer satisfaction metrics regarding the ability to restore
11 power quickly.

12
13 Response IR-7:

14
15 (a) The average customer total by operating region for the years 2021 to 2025 is provided in
16 the table below. These values are filed by NS Power as part of its Annual Power Line
17 Technician Report:

18

Average Number of Customers				
Year	West	Metro	Northeast	Cape Breton
2021	110,089	243,817	93,518	78,500
2022	113,550	250,626	96,305	80,440
2023	117,238	252,029	98,665	80,923
2024	117,475	256,459	99,342	80,675
2025	117,911	258,989	100,053	81,107

19
20 (b) Please refer to Attachment 1.

21
22 (c) Please refer to Attachment 2 and 3.

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- (d) As of 2025, the table below shows percentages of distribution line by region not requiring vegetation management:

Region	Percent of Distribution Line not Requiring Vegetation Management
Cape Breton	25%
Metro	22%
Northeast	27%
West	19%

- (i) None of NS Power's overhead feeders are fully free of vegetation management requirements. Therefore, no such analysis is possible.

- (e) Please refer to Attachment 4.

- (f) Please refer to Attachment 5.

- (g) Please refer to M12775 2025 Annual Power Line Technician (PLT) Report Figure 7 and 8, filed March 31, 2026 with the NSEB.

Residential Customer Satisfaction: Ability to Restore Power Quickly

Region	2021	2022	2023	2024	2025
West	86	77	78	75	83
Metro	80	72	62	71	78
Northeast	86	76	63	70	82
Cape Breton	85	74	66	73	65
Provincial	83	74	66	72	72

Business Customer Satisfaction: Ability to Restore Power Quickly

Region	2021	2022	2023	2024	2025
West	88	83	81	84	83
Metro	78	75	71	76	80
Northeast	88	84	74	75	81
Cape Breton	85	82	70	74	72
Provincial	83	80	74	77	77

2025 Length of Distribution OH Lines by Voltage Class and Region

Region	4K	12kv	25kV	Grand Total
Cape Breton	236	2,743	2,729	5,708
North East	277	3,583	4,766	8,626
West	236	6,896	1,255	8,388
Metro	35	2,209	3,431	5,674
Grand Total	784	15,431	12,181	28,396

Total Distribution Line Length (Km)

Year	Cape Breto	Metro	Northeast	West	Province
2020	5,552	5,413	8,408	8,185	27,558
2021	5,584	5,671	8,499	8,185	27,939
2022	5,666	5,760	8,570	8,313	28,309
2023	5,645	5,755	8,528	8,307	28,235
2024	5,735	5,884	8,651	8,431	28,701
2025	5,719	5,910	8,660	8,443	28,732

Number of Outages Experienced

Year	Cape Breto	Metro	Northeast	West	Province
2020	2,344	2,431	2,261	2,888	9,924
2021	2,866	2,551	2,615	2,591	10,623
2022	3,356	2,965	4,267	2,777	13,365
2023	2,272	2,887	2,766	2,821	10,746
2024	2,265	2,504	2,437	2,616	9,822
2025	2,077	2,334	2,266	2,445	9,122

Total Customer Hours of Interruption

Year	Cape Breto	Metro	Northeast	West	Province
2020	488,743	604,071	445,163	517,185	2,055,162
2021	894,488	808,742	481,227	557,583	2,742,040
2022	635,489	646,436	849,770	611,716	2,743,411
2023	662,507	970,346	640,092	529,858	2,802,803
2024	628,726	858,019	711,472	673,219	2,871,436
2025	677,519	827,071	632,302	508,601	2,645,493

Customer Hours of Interruption

Region	Year	Unknown	Loss of Supply	Tree Contacts	Lightning	Failed Equipment	Adverse Weather	Adverse Environment	Human Element	Foreign Interference
Cape Breton	2020	1.49%	11.09%	24.83%	0.09%	28.57%	18.64%	1.09%	0.00%	14.20%
Cape Breton	2021	5.08%	3.38%	24.49%	1.14%	20.02%	39.56%	0.82%	0.03%	5.48%
Cape Breton	2022	3.06%	7.90%	27.75%	0.02%	32.54%	19.50%	1.70%	0.16%	7.37%
Cape Breton	2023	3.90%	15.31%	29.69%	2.75%	27.17%	11.27%	0.88%	0.00%	9.02%
Cape Breton	2024	3.10%	25.27%	28.25%	1.91%	22.90%	9.70%	0.04%	0.01%	8.81%
Cape Breton	2025	8.69%	40.49%	19.59%	0.33%	15.10%	5.73%	0.04%	0.01%	10.03%
Metro	2020	7.77%	3.77%	18.55%	3.47%	28.58%	16.79%	0.57%	0.02%	20.49%
Metro	2021	6.98%	19.34%	20.04%	0.42%	20.33%	19.57%	0.29%	0.08%	12.94%
Metro	2022	9.19%	23.15%	20.74%	0.99%	15.70%	10.86%	0.19%	0.33%	18.85%
Metro	2023	4.76%	22.61%	17.86%	5.29%	16.56%	12.70%	1.94%	0.03%	18.25%
Metro	2024	4.96%	18.20%	24.24%	1.03%	17.36%	16.05%	0.03%	0.05%	18.08%
Metro	2025	8.30%	31.43%	12.56%	0.05%	26.64%	6.10%	0.01%	0.01%	14.90%
Northeast	2020	6.06%	41.67%	14.54%	2.37%	11.16%	11.76%	0.12%	0.06%	12.25%
Northeast	2021	6.91%	14.71%	33.59%	3.25%	14.07%	19.50%	0.06%	0.26%	7.65%
Northeast	2022	4.31%	20.97%	26.39%	2.39%	17.25%	20.16%	0.01%	0.01%	8.51%
Northeast	2023	4.99%	16.39%	31.26%	5.03%	15.03%	18.74%	0.02%	0.15%	8.38%
Northeast	2024	4.85%	7.57%	21.65%	1.43%	23.08%	25.15%	1.34%	0.01%	14.92%
Northeast	2025	9.08%	35.69%	19.31%	2.21%	14.94%	1.85%	0.02%	0.01%	16.90%
West	2020	11.21%	16.89%	40.91%	1.45%	10.87%	13.02%	0.06%	0.00%	5.60%
West	2021	5.11%	33.73%	24.71%	3.68%	9.78%	13.87%	0.01%	0.03%	9.08%
West	2022	5.66%	25.44%	36.63%	1.54%	12.39%	10.64%	0.14%	0.03%	7.53%
West	2023	6.30%	22.28%	21.98%	10.87%	11.42%	14.55%	5.54%	0.15%	6.92%
West	2024	7.98%	26.09%	34.35%	0.80%	8.39%	12.50%	0.01%	0.00%	9.87%
West	2025	7.84%	29.09%	37.34%	0.04%	9.59%	9.30%	0.06%	0.03%	6.71%

Event Count

Region	Year	Unknown	Loss of Supply	Tree Contacts	Lightning	Failed Equipment	Adverse Weather	Adverse Environment	Human Element	Foreign Interference
Cape Breton	2020	11.43%	0.55%	14.72%	1.45%	41.81%	11.65%	1.66%	0.17%	16.55%
Cape Breton	2021	15.39%	0.21%	20.06%	0.94%	34.61%	14.31%	0.87%	0.45%	13.15%
Cape Breton	2022	19.79%	0.36%	18.68%	0.48%	22.56%	26.16%	0.57%	0.33%	11.08%
Cape Breton	2023	17.34%	1.54%	16.81%	4.31%	33.80%	10.12%	1.23%	0.31%	14.52%
Cape Breton	2024	21.46%	1.06%	15.72%	5.30%	29.32%	9.89%	0.79%	0.40%	16.07%
Cape Breton	2025	33.41%	1.64%	15.94%	2.12%	24.75%	7.75%	0.91%	0.24%	13.29%
Metro	2020	15.55%	0.04%	16.08%	2.67%	36.20%	4.20%	0.62%	0.41%	24.23%
Metro	2021	21.25%	0.90%	17.09%	2.82%	27.87%	6.19%	0.39%	0.43%	23.13%
Metro	2022	19.87%	0.57%	22.19%	0.78%	24.38%	10.08%	0.67%	0.71%	20.74%
Metro	2023	16.70%	1.21%	16.83%	8.73%	26.32%	8.42%	2.36%	0.69%	18.74%
Metro	2024	17.65%	0.88%	17.05%	2.48%	26.72%	7.51%	0.68%	0.60%	26.44%
Metro	2025	31.53%	1.11%	13.20%	0.39%	26.52%	3.13%	0.43%	0.64%	23.09%
Northeast	2020	10.88%	1.37%	18.13%	7.25%	36.53%	5.04%	0.75%	0.44%	19.64%
Northeast	2021	15.95%	0.65%	23.02%	6.23%	29.10%	7.46%	0.69%	0.31%	16.63%
Northeast	2022	15.84%	0.87%	29.67%	1.92%	20.37%	20.67%	0.30%	0.21%	10.15%
Northeast	2023	17.93%	1.19%	26.79%	4.77%	22.09%	12.08%	0.43%	0.33%	14.39%
Northeast	2024	19.70%	0.37%	20.48%	4.10%	23.55%	12.27%	0.86%	0.25%	18.42%
Northeast	2025	33.54%	1.10%	17.43%	3.88%	21.58%	5.34%	0.84%	0.22%	16.06%
West	2020	10.18%	1.70%	27.94%	3.88%	29.22%	11.50%	0.52%	0.07%	14.99%
West	2021	20.03%	2.47%	21.61%	5.25%	23.89%	10.88%	0.42%	0.23%	15.21%
West	2022	17.36%	1.98%	23.41%	2.48%	21.35%	14.80%	0.79%	0.14%	17.68%
West	2023	15.14%	2.20%	19.50%	12.19%	21.34%	12.51%	0.85%	0.18%	16.09%
West	2024	19.27%	2.10%	25.27%	2.71%	19.84%	12.31%	0.50%	0.15%	17.85%
West	2025	29.53%	1.47%	22.04%	0.70%	19.18%	8.79%	0.86%	0.57%	16.85%

2025 Annual Performance Standards Report IR-7
Attachment 3 has been filed electronically.

2025 Annual Performance Standards Report IR-7
Attachment 4 has been filed electronically.

2025 Annual Performance Standards Report IR-7
Attachment 5 has been filed electronically.

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Request IR-8:

Page 9 of the report states:

“NS Power is already seeing positive results from the \$206 million invested in the first year of the reliability plan. There was a 19 percent reduction in outages due to trees coming into contact with power lines in 2025 compared to 2024 and an 18 percent reduction in outages due to equipment failures.”

(a) Please confirm that the noted percentage reductions in outages excludes any outages associated with MEDs and EEDs.

(i) If not confirmed:

(A) Please provide the percentage reductions in tree contact and equipment failure outages, excluding any outages associated with MEDs and EEDs.

(I) Please provide the underlying outage data upon which these calculations are based.

(B) Please provide the number of outages related to tree contacts (exclusive of those associated with MEDs and EEDs) for each year from 2020 to 2025.

(C) Please provide the number of outages related to equipment failures (exclusive of those associated with MEDs and EEDs) for each year from 2020 to 2025.

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1 **(ii) If confirmed:**

2
3 **(A) Please provide the underlying outage data upon which these**
4 **calculations are based.**

5
6 **(B) Please provide the number of outages related to tree contacts (exclusive**
7 **of those associated with MEDs and EEDs) for each year from 2020 to**
8 **2025.**

9
10 **(C) Please provide the number of outages related to equipment failures**
11 **(exclusive of those associated with MEDs and EEDs) for each year from**
12 **2020 to 2025.**

13
14 **(iii) Board staff notes that in response to NSEB IR-185 in M12619 (2026 ACE**
15 **Plan), NS Power provided a table showing outages caused by equipment**
16 **failures in 2024 and 2025. The outage numbers noted in that Information**
17 **Request response are 2,426 for 2024 and 2,091 for 2025. This represents an**
18 **approximate 14% reduction in outages caused by failure of equipment from**
19 **2024 to 2025. Please reconcile this with NS Power's statement on page 9 of the**
20 **2025 Performance Standard Report that this was an 18% reduction.**

21
22 Response IR-8:

23
24 (a) Confirmed. Performance Standards reliability metrics by definition exclude impacts from
25 MEDs and EEDs. However, as noted in part (iii) below, the percentage improvement in
26 event count for failed equipment originally quoted was a typographical error.

27
28 (i) N/A
29
30

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(ii)

(A) Please refer to the tables below for outage event count data used to calculate the percent changes in outage events coded as Tree Contacts and Failed Equipment between 2024 and 2025.

Year	Tree Contacts		Failed Equipment	
	Events	Percent Change	Events	Percent Change
2024	1,943	-19%	2,426	-14%
2025	1,573		2,091	

(B) Please refer to the table below for the number of events coded as Tree Contacts for years 2020 to 2025.

Year	Events
2020	1,953
2021	2,173
2022	3,201
2023	2,159
2024	1,943
2025	1,573

(C) Please refer to the table below for the number of events coded as Failed Equipment for years 2020 to 2025.

Year	Events
2020	3,530
2021	3,083
2022	2,942

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2023	2,741
2024	2,426
2025	2,091

1
2 (iii) The 18 percent figure referenced on Page 9 of the 2025 Performance Standards
3 report was due to a typographical error. The 14% improvement included in response
4 to NSEB IR-185 in M12619 (2026 ACE Plan) is the correct value for this statement
5 and reflects the observed change in failure of equipment outage event totals.

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Request IR-9:

Page 9 of the report states:

“Outages caused by trees making contact with power lines were at the lowest levels in the last five years both in terms of how many tree-related outages occurred on the system and how long they lasted. NS Power invested \$45 million in vegetation management in 2025, building on an additional \$45 million investment in 2024 and representing an 80 percent increase over the 2019-2023 five-year annual average of ~\$25 million.”

(a) For each year from 2020 to 2025, for outages caused by tree contacts only (exclusive of those associated with MEDs and EEDs) please provide a table identifying the following:

- (i) The total number of customer interruptions (CI).**
- (ii) The total number of customer hours of interruptions.**
- (iii) The customer average interruption duration index.**

(b) Please identify the percentage reduction/increase in customer hours of interruption resulting in outages due to tree contacts only (excluding those resulting from MEDs and EEDs) from:

- (i) 2020 to 2025.**
- (ii) 2023 to 2024.**
- (iii) 2024 to 2025.**

(c) For each year from 2020 to 2025, for outages caused by tree contacts only on lines on which NS Power completed vegetation management work in those years (exclusive of any outages associated with MEDs and EEDs) please provide a table identifying the following:

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1 **(i) The total number of customer interruptions.**

2 **(ii) The total number of customer hours of interruptions.**

3 **(iii) The customer average interruption duration index.**

4
5 **(d) Please identify the percentage reduction/increase in customer hours of interruption**
6 **resulting in outages due to tree contacts only on lines on which NS Power completed**
7 **vegetation management work in those years (exclusive of any outages associated with**
8 **MEDs and EEDs) from:**

9
10 **(i) 2020 to 2025.**

11 **(ii) 2023 to 2024.**

12 **(iii) 2024 to 2025.**

13
14 **(e) Please provide a table identifying NS Power's total annual expenditures on:**

15
16 **(i) O&M vegetation management.**

17 **(ii) Capital vegetation management (including routine D010 and New ROW**
18 **spending) for each year from 2019 to 2025.**

19
20 Response IR-9:

21
22 **(a) Performance standards data for outage events coded as caused by Tree Contact for years**
23 **2020-2025 is provided in the table below for customer interruptions (CI), customer hours**
24 **of interruption (CHI), and customer average interruption duration index (CAIDI or**
25 **SAIDI/SAIFI).**

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Year	CI	CHI	CAIDI
2020	228,662	509,709	2.23
2021	240,262	680,499	2.83
2022	246,830	758,744	3.07
2023	210,681	686,530	3.26
2024	259,071	770,960	2.98
2025	214,341	548,590	2.56

(b)

Period	Year 1 CHI	Year 2 CHI	% Change
2020-2025	509,709	548,590	7.63%
2023-2024	686,530	770,960	12.30%
2024-2025	770,960	548,590	-28.84%

(c) Performance standards data for outage events coded as caused by Tree Contact on circuits where NS Power worked in the same year for years 2020-2025 is provided in the table below for customer interruptions (CI), customer hours of interruption (CHI), and customer average interruption duration index (CAIDI or SAIDI/SAIFI).

Year	CI	CHI	CAIDI
2020	104,351	265,629	2.55
2021	142,286	434,430	3.05
2022	138,001	521,665	3.78
2023	118,759	421,160	3.55
2024	136,042	408,063	3.00
2025	120,002	330,618	2.76

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(d)

Period	Year 1 CHI	Year 2 CHI	% Change
2020-2025	265,629	330,618	-24%
2023-2024	421,160	408,063	3%
2024-2025	408,063	330,618	19%

While the data has been provided as requested, it is unclear to NS Power as to how this analysis provides insights into vegetation management as the lines worked on as well as the volumes will vary between the compared years. This does not allow for a meaningful comparison between performance in a given year or overtime.

(e) Annual totals for O&M and capital vegetation management spend for the years 2019 to 2025 is provided in the table below.

Year	O&M	Capital
2019	\$13,869,033	\$28,187,632
2020	\$5,985,083	\$16,428,783
2021	\$5,969,931	\$22,479,794
2022	\$5,744,723	\$15,606,534
2023	\$9,740,164	\$21,930,425
2024	\$9,922,230	\$34,693,800
2025	\$11,472,697	\$33,258,394

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Request IR-10:

Page 9 of the report, when discussing the Five-Year Reliability Plan, states:

The commitment to the Plan, included in NS Power’s 2026 Annual Capital Expenditure (ACE) Plan, will help continue improving reliability for customers, while balancing the lowest rates possible and addressing the realities of climate change Nova Scotians are facing.

(a) How does NS Power achieve the “lowest rate possible” while striving to improve reliability in a climate change environment?

(b) What rate impact analysis does NS Power do when deciding to submit reliability projects to the Board for approval or otherwise implementing the Five-Year Reliability Plan?

Response IR-10:

(a) The balancing of “lowest rate possible” with reliability improvement occurs primarily through:

- a. Collaborative stakeholder processes (such as the GRA collaborative approach).
- b. Board review and approval of ACE Plans and revenue requirements.
- c. Risk-based prioritization to focus investment on highest-value interventions.
- d. Performance-based accountability through tracking actual results against projected improvements with actual weather experienced.

(b) Rate impact analysis occurs through various avenues:

- a. Revenue requirement impact calculations are performed for capital projects as part of ACE Plan filings, comparing incremental rate base effects of alternatives.
- b. Project-specific rate impacts are not calculated for individual reliability projects; instead, aggregate revenue requirements (including all reliability program costs) are addressed through General Rate Applications.

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- 1 c. The 2026-2027 GRA reflects the cumulative rate impact of the Five-Year
2 Reliability Plan alongside all other cost components.
- 3 d. Most Five-Year Reliability Plan investments are essential (required to meet
4 Performance Standards), meaning the revenue requirement analysis informs
5 alternative selection but does not trigger a decision based solely on rate impact.

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Request IR-11:

Page 9 of the report states:

“NS Power is already seeing positive results from the \$206 million invested in the first year of the reliability plan.”

Please provide the five-year average outage frequency and duration results (similar to SAIDI and SAIFI) for only those parts of NS Power’s system where the \$206 million was actually invested in the first year of the reliability plan.

Response IR-11:

NS Power does not track performance, including equivalents to SAIFI and SAIDI, by the specific area where investments have taken place, so no such analysis is available at this granularity. The most granular level available for investment and performance monitoring is at the feeder level. The feeder outage frequency and duration (CKAIFI and CKAIDI) performance is provided in Appendix I of the 2025 Performance Standards report. The five-year (2021-2025) average outage frequency and duration performance (MED and Planned excluded) for feeders where work occurred in 2025 is provided in the table below:

	Average CI	Average CHI	Average Cust.	SAIFI	SAIDI
2021-2025	530,183	1,450,412	202,039	2.62	7.18

NS Power emphasizes that the benefits of a given investment may not be manifested immediately following the investment, particularly for those investments taking place later in a given year, or as part of a larger program, and may only be fully realized in future years. The compounding effects of multiple investments on NS Power’s system is also not necessarily captured at this local level. Furthermore, depending on the scale of the investment, the location of the intervention, and

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1 the type of risk that it is designed to mitigate, the change in risk (and reliability performance) will
2 vary from feeder to feeder.

3
4 Finally, NS Power again notes that its risk mitigation strategies are not simply driven by lagging
5 indicators like outage frequency and duration, rather it is based on the combination of these lagging
6 indicators as well as leading indicators like inspection results and vegetation condition.
7 Consequently, an investment designed to contribute to improving reliability and included in the
8 Five-Year Reliability Plan, may not show a direct improvement in SAIFI and SAIDI as it is
9 preventing outage impacts that have not yet occurred.

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Request IR-12:

Page 10 of the report states:

“Targeted reliability work on 46 priority feeders across the province was completed in 2025 for targeted equipment replacements, protection upgrades, load growth upgrades, building to roadside and tree trimming.”

(a) For each year from 2020 to 2025, for outages caused by equipment failure only (exclusive of those associated with MEDs and EEDs) please provide a table identifying the following:

- (i) The total number of customer interruptions.**
- (ii) The total number of customer hours of interruptions.**
- (iii) The customer average interruption duration index.**

(b) Please identify the percentage reduction/increase in customer hours of interruption resulting in outages due to equipment failure only (excluding those resulting from MEDs and EEDs) from:

- (i) 2020 to 2025.**
- (ii) 2023 to 2024.**
- (iii) 2024 to 2025.**

(c) Please provide a table identifying NS Power’s total annual expenditures on capital spending related to T&D equipment failure for each year from 2019 to 2025.

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Response IR-12:

- (a) Performance standards data for outage events coded as caused by equipment failure for years 2020-2025 is provided in the table below for customer interruptions (CI), customer hours of interruption (CHI), and customer average interruption duration index (CAIDI or SAIDI/SAIFI).

Year	CI	CHI	CAIDI
2020	253,326	418,145	1.65
2021	240,052	465,752	1.94
2022	306,092	530,680	1.73
2023	256,600	497,393	1.94
2024	243,823	513,704	2.11
2025	156,378	465,871	2.98

- (b) The percent change in CHI between the periods of interest are provided in the table below.

Period	Year 1 CHI	Year 2 CHI	% Change
2020-2025	418,145	465,871	11.4%
2023-2024	497,393	513,704	3.3%
2024-2025	513,704	465,871	-9.3%

- (c) Addressing performance standards outages coded as Failed Equipment, including replacement of the failed equipment itself would be captured by the D005-Unplanned Replacement Deteriorated Equipment distribution routine. Total expenditure in the D005 routine for the years 2020 to 2025 is provided below.

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2

Year	D005 Expenditure
2020	\$17,293,412
2021	\$19,781,007
2022	\$17,884,715
2023	\$24,214,193
2024	\$26,385,283
2025	\$21,501,960

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Request IR-13:

Page 10 of the report notes that the targeted reliability work on 46 priority feeders across the province were completed in 2025 for targeted equipment replacements, protection upgrades, load growth upgrades, building to roadside and tree trimming.

(a) Please provide a breakdown of the total investment on these feeders based on categories noted above.

(b) Please provide the underlying data, such as total customer hours of interruptions or the number of outages experienced, that were used to select these feeders over the others.

(c) Please provide the performance metrics that will be used to determine the effectiveness of the investments on these feeders and how they will be tracked.

Response IR-13:

(a) Please refer to attachment Attachment 1.

(b) Feeders were prioritized for interventions through NS Power's asset management mechanism that assesses risk and guides mitigating measures. Please refer to NS Power's response to M12558 Synapse IR-28 for the underlying data used to select these feeders for prioritization.

(c) Program effectiveness is evaluated cumulatively by tracking changes in an asset's risk rating over time, such as a distribution feeder, following one or more investments. This approach incorporates both leading and lagging risk indicators, integrates performance metrics like CKAIDI and CKAIFI, and provides assurance that capital investments are delivering the intended outcomes.

2025 Annual Performance Standards Report IR-13
Attachment 1 has been filed electronically.

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Request IR-14:

Page 11 of the report notes that 6 substations and 23 downline protective devices were upgraded to include remote control and telemetry. Engineering planning and procurement is now under way for additional devices for substations in 2026. Grid Modernization upgrades such as these are proven methods to decrease the duration of outages for customers.

(a) Please provide the list of projects that were completed on the 6 substations and the 23 downline protective devices along with the associated cost.

(b) What performance metrics were the utility aiming to achieve with these projects?

(c) What level of improvement is expected after these projects, and how will the utility measure performance before and after implementation?

Response IR-14:

(a) The devices installed were completed within the following projects:

2025 Downline Recloser Additions (CI# C0070426):

Region	Feeder	Communities Impacted
Northeast	24C-442	Canso and surrounding area
Northeast	50N-410	Merigomish and surrounding area
Cape Breton	22C-404	Isle Madame
Cape Breton	81S-303	Glance Bay, Port Morien
Metro	127H-411	Waverley and Fall River
West	55V-314	Berwick, Aylesford and Burlington
West	55V-314	Berwick, Aylesford and Burlington

2025 Trip Saver Additions Project (CI # C0070366):

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Region	Feeder	Quantity
East	57S-401	1
East	81S-301	1
East	85S-401	1
Northeast	4N-313	1
Northeast	56N-414	1
Northeast	6N-301	1
Metro	113H-433	1
West	57W-401	2
West	70W-311	1
West	78W-301	1
West	80W-301	1
West	91W-411	4

2020 RTU Deployment Project (CI# C0021109):

Region	Area/Community	Substation
Cape Breton	Southwest Margaree	58C
Northeast	Tatamagouche	4N
West	Bridgewater Rural	70V
West	Kingston	63V
West	Ohio Road	25W
West	Wolfville Ridge	83V

Please refer to 2026 ACE M12619, Undertaking U-05 for project costs.

(b) NS Power will continue to track CKAIDI and CKAIFI at a feeder level and SAIFI and SAIDI at a system level to align with Performance Standards metrics and reporting.

(c) Please refer to NSEB IR-13 (C).

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Request IR-15:

Figure 1 on page 12 of the report presents a bar chart of Improvement in SAIFI from 2021 to 2025, showing the annual SAIFI experienced by NS Power customers and the improvement over time, from more than 2.25 outages per year down to 1.57 outages per year in 2025. Figure 2 on page 12 of the report shows the annual System Average Interruption Duration Index (SAIDI) and the improvement over the last five years, from 5.23 hours to 4.79 hours.

Based on the customer data provided in Matters M12775 and M10548, the Board notes that the utility's total number of customers was 525,924 in 2021 and 558,060 in 2025. Since 2021, please provide the yearly data for each of NS Power's four operating regions (West, Metro, Northeast, and Cape Breton), where applicable, in an Excel sheet:

(a) Number of Customers.

(b) SAIFI and SAIDI bar chart as provided in Figure 1 and Figure 2.

(c) Number of outages experienced, and the total customer hours of interruptions.

Response IR-15:

(a) Please refer to NSEB IR-07 Part (a).

(b) Please refer to Attachment 1 for SAIFI and SAIDI data by operating region for years 2021 to 2025.

(c) Please refer to Attachment 1 for number of events and total customer hours of interruption data by operating region for years 2021 to 2025.

Region	Year	Average Customers	CI	CH	Event Count	SAIDI	SAIFI	
Cape Breton	2021	78,500		228,467	894,488	2,866	11.39	2.91
Cape Breton	2022	80,440		223,055	635,489	3,356	7.90	2.77
Cape Breton	2023	80,923		243,570	662,507	2,272	8.19	3.01
Cape Breton	2024	80,675		182,079	628,726	2,265	7.79	2.26
Cape Breton	2025	81,107		184,318	677,519	2,077	8.35	2.27
Metro	2021	243,817		455,911	808,742	2,551	3.32	1.87
Metro	2022	250,626		423,357	646,436	2,965	2.58	1.69
Metro	2023	252,029		458,542	970,346	2,887	3.85	1.82
Metro	2024	256,459		385,645	858,019	2,504	3.35	1.50
Metro	2025	258,989		314,358	827,071	2,334	3.19	1.21
Northeast	2021	93,518		218,816	481,227	2,615	5.15	2.34
Northeast	2022	96,305		310,735	849,770	4,267	8.82	3.23
Northeast	2023	98,665		236,155	640,092	2,766	6.49	2.39
Northeast	2024	99,342		254,191	711,472	2,437	7.16	2.56
Northeast	2025	100,053		194,766	632,302	2,266	6.32	1.95
West	2021	110,089		289,254	557,583	2,591	5.06	2.63
West	2022	113,550		204,469	611,716	2,777	5.39	1.80
West	2023	117,238		234,106	529,858	2,821	4.52	2.00
West	2024	117,475		262,584	673,219	2,616	5.73	2.24
West	2025	117,911		175,746	508,601	2,445	4.31	1.49

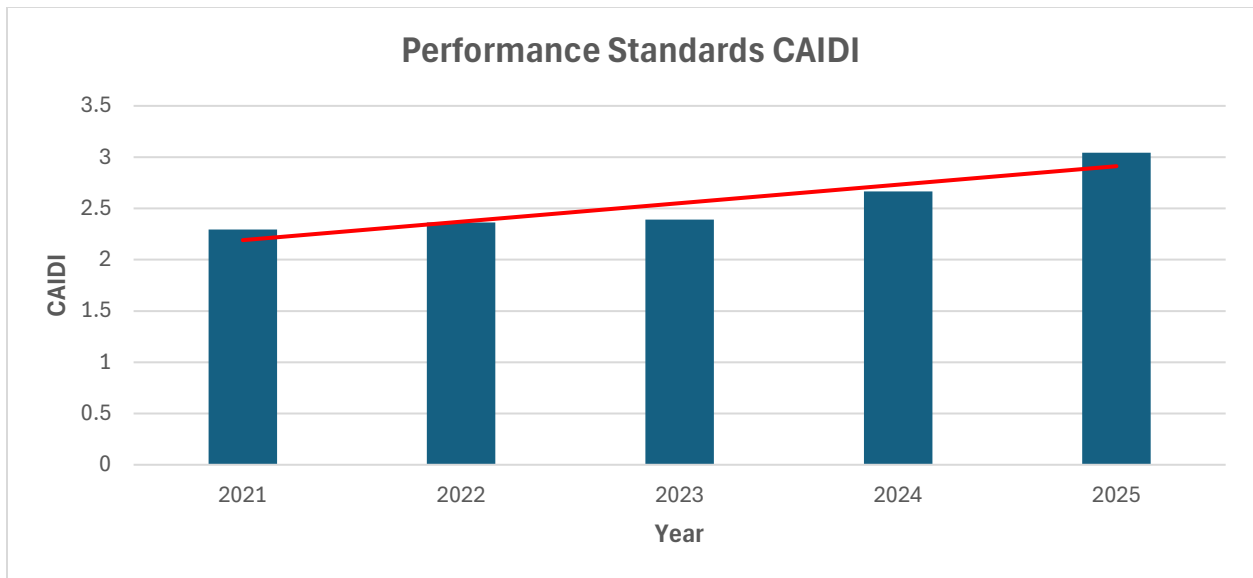
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Request IR-16:

Regarding Figures 1 and 2 on pages 12-13: Please provide a similar Figure to show the customer average interruption duration index for each year from 2021 to 2025.

Response IR-16:

Performance Standards Customer Average Interruption Duration Index (CAIDI or SAIDI/SAIFI) for the years 2021 to 2025 is shown in the figure below. While NS Power considers CAIDI to be an informative indicator as it is a measure of average restoration time; when considered in isolation it can be a potentially misleading metric as it can continue to increase even if SAIFI or SAIDI decrease. In particular, performance in 2025 saw improvements in both performance standards SAIFI and SAIDI compared with 2024, but as a result of a proportionally larger improvement in SAIFI, CAIDI increased. Consequently, NS Power does not consider CAIDI alone as an appropriate measure of overall performance.



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Request IR-17:

Regarding the foreign interference outage causes listed on page 15 of the report: For each year from 2021 to 2025, please provide the number of outage events caused by each of the foreign interference causes, and provide the total number of outages on NS Power's system (exclusive of planned outages, and outages resulting from MEDs, EEDs and SEDs immediately following an MED or EED).

Response IR-17:

For Performance Standards events in the period of 2021 to 2025 please find the number of outage events coded as foreign interference and the total number of outage events in the table below.

Year	Number of Foreign Interference Events	Total Number of Events
2021	1,796	10,626
2022	1,911	13,365
2023	1,723	10,746
2024	1,942	9,822
2025	1,591	9,124

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Request IR-18:

Regarding Figure 3 on page 16 of the report:

(a) Does NS Power agree that the current SAIDI performance target has been set with consideration of inclusion of outages caused by foreign inference?

(i) If not, please explain.

(b) Does NS Power agree that if the current SAIDI performance target had been set to exclude the impacts of outages caused by foreign interference, the target would be lower than the current target?

(i) If not, please explain.

(c) Since the SAIDI calculation has the sum of all customer interruption durations as the numerator, which is a unit of time, why is the cause of the interruption relevant?

Response IR-18:

(a) Yes. Outages coded as foreign interference were included in the dataset (January 2012 to October 2016) used to set the original Performance Standards target for SAIDI.

(b) The overall target for Performance Standards SAIDI is calculated as a rolling 5-year average (with the exception of 2016 where 10 months of performance were used to represent the entire year) plus one standard deviation. The comparison between PS SAIDI in the target setting years with and without foreign interference coded outages is provided in the table below.

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Year	PS SAIDI	PS SAIDI (Foreign Interference Removed)
2012	2.90	2.55
2013	3.52	3.21
2014	3.87	3.45
2015	4.67	4.31
2016 (To Oct)	3.62	3.29
Average Annual SAIDI	3.72	3.36
Standard Deviation	0.58	0.56

Using the target setting methodology we see a target of 4.29 for SAIDI with Foreign Interference events included and a target of 3.93 for SAIDI when such events are excluded. If November and December 2016 had been included in the original setting of the targets, a full 12 months rather than 10 months for the year, the resulting values would have been approximately 4.78 and 4.38 for foreign interference included and removed respectively.

Accounting for these different targets, the SAIDI performance against the threshold can be re-assessed in the table below:

	PS SAIDI		PS SAIDI (Foreign Interference Removed)	
Year	Target	Result	Target	Result
2017	4.29	3.40	3.93	3.09
2018	4.29	4.43	3.93	4.10
2019	4.29	5.99	3.93	5.36
2020	4.29	3.98	3.93	3.44
2021	4.29	5.23	3.93	4.77
2022	4.29	5.16	3.93	4.62
2023	4.29	5.21	3.93	4.61

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	PS SAIDI		PS SAIDI (Foreign Interference Removed)	
2024	4.29	5.26	3.93	4.56
2025	4.29	4.79	3.93	4.19

While a change of approach for target setting and removal of foreign interference-caused events would not have resulted in any additional years meeting the standard, the differences in performance does illustrate the impact of these events.

While the target does change, what is important is the relationship between actual performance and the target. As events coded as foreign interference, like motor vehicle accidents, electrical contacts by the public, or wildlife interfering with equipment can be outside the utility's control, the Company's ability to mitigate the risks of such outages is similarly limited. By illustrating the impacts from such events, NS Power provides additional context on their influence on the overall SAIDI performance.

- (c) As calculated, the absolute value for SAIDI itself in a given year does not rely on the nature of the interruption. However, in order to address the underlying drivers for SAIDI performance, the contributions by cause of interruptions is a critical input. When determining risk-mitigating interventions, they should be targeted based on the risks to be mitigated. When these risks are driven by reliability performance (outage frequency and duration), selecting an appropriate mitigating strategy (for example, vegetation management or device replacement) should be made in consideration of the outage cause. Using ROW widening to mitigating deteriorating poles will not address the outage risk posed by failure of those assets. Likewise, installing new insulators in a feeder section will not reduce the likelihood of a future tree contact. Consequently, understanding the cause of interruptions, along with other leading and lagging condition indicators, supports effective risk-based decision-making.

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Request IR-19:

Page 16 of the report, Figure 3

Please provide the annual contribution of foreign interference outages (“outside Control”) to SAIDI and SAIFI for the past 10 years.

Response IR-19:

The contribution to Performance Standards SAIFI and SAIDI from outage events coded as Foreign Interference from 2016 to 2025 is provided in the table below.

Year	SAIFI Contribution	SAIDI Contribution
2016	0.24	0.36
2017	0.20	0.31
2018	0.16	0.33
2019	0.21	0.60
2020	0.30	0.54
2021	0.20	0.46
2022	0.29	0.54
2023	0.27	0.61
2024	0.28	0.70
2025	0.20	0.60

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1 **Request IR-20:**

2
3 **Regarding Section 2.1**

4
5 **“Potential for Future Improvements in Performance Standards”, on page**
6 **17 of the report, NS Power states: “This data shows that as the standards**
7 **become more stringent as performance improves that the bar that feeders**
8 **must meet to achieve the feeder standards will become increasingly**
9 **challenging.”**
10

11 **(a) Does NS Power agree that as its reliability performance improves, its performance**
12 **targets should become stricter to reflect the improved performance? Please explain.**
13

14 **(i) If not, without stricter performance targets, what regulatory tools would the**
15 **Board have to incent NS Power from simply maintaining its**
16 **performance/reliability once it has consistently met a certain performance**
17 **target?**
18

19 **(b) Is NS Power suggesting that, as performance improves, there is a point where the**
20 **gains achieved by applying two standard deviations to the five-year average, in setting**
21 **the Circuit Average Interruption Duration Index (CKAIDI) and Circuit Average**
22 **Interruption Frequency Index (CKAIFI) standards, no longer justify the costs? If so,**
23 **please explain.**
24

25 **Response IR-20:**
26

27 **(a) NS Power generally agrees with the current methodology used to set Performance**
28 **Standards reliability targets. The targeted investment outlined in the 5-Year Reliability**
29 **Plan are designed to meet the targets as written.**
30

31 **(b) NS Power believes that the Company’s Asset Management Framework continues to be the**
32 **most appropriate method to address asset risks, including feeder and system performance.**

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1 It does not foresee a scenario where significant risks would remain unmitigated simply due
2 to a cost comparison between investment and penalty. However, as circuit performance
3 improves across the system, the target setting approach inherent in this methodology will
4 continue to drive a more stringent level for the CKAIFI and CKAIDI threshold for penalty.
5 As illustrated in the 2025 Report, even for circuits where substantial improvement is
6 achieved, their relative performance position, and therefore their likelihood to exceed the
7 threshold, also depends strongly on the performance of every other circuit. Both the
8 average and standard deviation of circuits performance inform the threshold and as these
9 tighten with improved performance, the threshold also tightens. The nature of this
10 relationship between circuits can still result in circuit violation due small differences in the
11 frequency and duration of outages when the targets tighten as they did in 2025. In a scenario
12 with very stringent circuit targets, more significant interventions would be necessary to
13 reduce outage impacts further, even for difficult to mitigate outage causes such as motor
14 vehicle accidents, necessitating more investment above current levels. Depending on the
15 specific circumstances of a feeder, NS Power would continue to submit data-driven, risk-
16 based mitigation programs and projects as appropriate.

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1 **Request IR-21:**

2
3 **Page 18 of the report, Figure 4. The graph appears to show feeders 57W-402 and 91W-411**
4 **exceeding the 2025 CKAIFI threshold but the text below the graph suggests that 57W-401**
5 **and 91W-411 exceeded the threshold.**

6
7 **(a) Please confirm whether it was 57W-401 or 57W-402 that exceeded the threshold and**
8 **advise whether this discrepancy has any other impacts on any of the information in**
9 **Exhibit N-1.**

10
11 **Response IR-21:**

12
13 **(a) 57W-402 exceeded the threshold as noted in Figure 36.**

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1 **Request IR-22:**

2
3 **Regarding s. 3.1 of the report, on page 24, NS Power says:**

4
5 **Billing inquiries increased following the cyber incident, driving an increase in**
6 **overall call volumes (~+46 percent) and additional support and assistance**
7 **(~+189 percent) above historical levels.**
8

9 **(a) What time frame was used to establish the “historical levels”?**

10
11 **Response IR-22:**

12
13 The average Billing-specific call volumes and escalations in 2023 and 2024 for the period May –
14 December were taken as the baseline historical level for the relative statement.

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Request IR-23:

Page 25 of the report and Appendix A and Appendix B

(a) Please confirm, or explain in detail otherwise, that the reduced service level percentages beginning in June 2025 shown in Appendix A coincides with the significant increase in estimated bills beginning in May 2025.

(b) Please provide details about the changes in the “composition and complexity” of customers interactions referenced on p. 25 of 115, line 11.

(c) Please discuss in detail the extent to which customer calls between June and November related to problems with customers understanding NS Power’s estimation process and problems with the accuracy of the estimates themselves.

Response IR-23:

(a) Confirmed. there was a strong correlation between service levels from June through December 2025 and the customer billing experience as it relates to estimated bills.

(b) Customer concerns relating to the cyber incident was evident across all call types handled within NS Power Customer Care Centre and represented an additional component within calls CSAs needed to address. This was compounded by impacts to systems (excluding CIS) which CSAs depend on to respond effectively to customer requests. The activities required on CSA calls to resolve customer requests became much more manual, due to this system unavailability, loss of integrations, and limited automation resulting from cyber impacts.

(c) Customer concerns with the billing experience represented a significant component of call volume to the customer care centre. Relative to the average baseline in 2023-2024, Billing

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1 call volume in 2025 following the cyber incident was ~46 percent higher. Among the
2 incremental call volume, the more prevalent calls were to discuss the accuracy of an
3 estimate and understand how to read a bill that used or followed an estimate.

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Request IR-24:

Page 27 of the report states:

“Approximately 40 additional customer care representatives were added through the summer and fall of 2025 to help address the new trend in both call volume and length. NS Power hired all successfully qualified customer service representatives from our recruitment efforts, with no caps during recruitment.”

(a) Please provide more detailed information about NS Power’s recruitment efforts for customer care representatives after the cybersecurity breach.

(b) Please provide the posting and closing dates of all recruitment efforts for customer care representatives in 2025 after the cybersecurity breach.

(c) How many people applied for the positions, out of which only 40 were ultimately selected.

Response IR-24:

Please refer to the following for response (a-c).

Requisition	Posting Date	Class Start Date	Number of Applicants	Number of Interviews	Number Hired
2025-4011	12-Mar-25	5-May-25	424	33	13
2025-4292	24-Jun-25	18-Aug-25	763	54	11
2025-4589	2-Sep-25	3-Nov-25	580	45	13
2025-4850	14-Nov-25	26-Jan-26	477	48	16

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Request IR-25:

Figure 10 of the report on page 30 shows system availability for customer outage notifications in 2025. The data network was available 66.58% of the time.

(a) What kinds of customer notification services access the data networks, and how were those services not impacted when the data networks were unavailable?

Response IR-25:

(a) The Data Network impact referenced is for the Outage Map. The downtime was due to both containment efforts and impacts of the cyber incident on IT systems. During this downtime, the outage map remained available to customers and updated via activated contingency plans, explaining the 33.42 percent of the time that the contingency plan was activated, which is directly correlated to the unavailability of the data network.

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Request IR-26:

Page 36 and Appendix G of the report states:

“The elevated Polite Disconnect rate in 2025 is attributable to the impacts of the April 2025 cyber incident, as trunking capacity was limited at the contingency contact centre site, where NS Power staff answered outage calls in the first few weeks following the incident.”

(a) Please explain how the trunking capacity was limited.

(b) Please explain why the trunking capacity at the contingency contact site was limited, given that it would be expected that this site would operate in the context of business interruptions when it would be assumed that circumstances might exist that would drive significant call volumes.

Response IR-26:

(a) Trunks are typically used in contract centre configuration to handle multiple voice calls through a single number, connecting callers to agents. The number of concurrent calls that can be on the system is limited to the number of trunks deployed. In terms of the contingency site, the limitation is related to the number of desks at the site and the number of physical phone lines active, neither of which can be scaled quickly in the event existing capacity is reached or exceeded.

(b) The contingency site was designed for short term operations in the event of a disaster and not intended to provide a full-service contact centre experience. Instead, when it is invoked, capacity is deliberately focused on high priority and safety-critical calls (such as wires down) rather than routine traffic. The contingency site is limited by physical space and phone lines available, but additional desks were added following the cyber incident to

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- 1 ensure the highest priority calls could be answered. Lower priority calls are met with the
- 2 polite disconnect message.

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Request IR-27:

Figure 18 on page 43 shows customer impact and restoration time-all-in.

(a) Provide a breakdown of customers impacted based on five or more updated Estimated Time to Restore (ETR), along with their corresponding restoration times and locations.

(b) What is the process and criteria for issuing an updated ETR and provide a specific example.

Response IR-27:

(a) Please refer to NSEB IR-27 Attachment 1 for a list of the 202 outages which had 5 or more ETRs along with their corresponding restoration time and depot.

(b) NS Power issues updated Estimated Time to Restore (ETR) information as more accurate information becomes available during the restoration process. Initial ETRs are assigned based on historical restoration data and outage characteristics and can be subsequently updated once field crews confirm the cause, scope of damage, and required repairs.

Updates are made when new information becomes available, including changes in outage cause, site conditions, access constraints, or resource requirements. Real-time updates from field crews and system data (e.g., AMI) are used to improve accuracy during restoration.

An example of how an ETR is first applied and subsequently updated is provided below:

An outage will initially be assigned an ETR based on a typical restoration time for a suspected overhead fault. This initial estimated restoration time is based on the predicted size and location of the outage. These outage characteristics are cross-referenced against

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1 historical restoration times for similar outages to determine the initial estimate. Upon
2 arrival, crews may determine that the damage is located off-road with difficult access,
3 requiring additional time to locate the fault and mobilize specialized equipment. Based on
4 this field-validated information, the ETR would be updated by NS Power to reflect the
5 longer restoration timeline. Conversely, if crews determine the issue is isolated and simpler
6 to repair than initially anticipated, the ETR may be revised earlier.

2025 Annual Performance Standards Report IR-27
Attachment 1 has been filed electronically.

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Request IR-28:

Regarding Figure 29 and 30 in the report (pages 52-53): Board staff notes that the CI numbers in the Figures do not appear to match those provided in responses to NSEB IR-184 and IR-185 in M12619 (2026 ACE Plan). Please reconcile and provide revised Figures 29 and 30 as may be required.

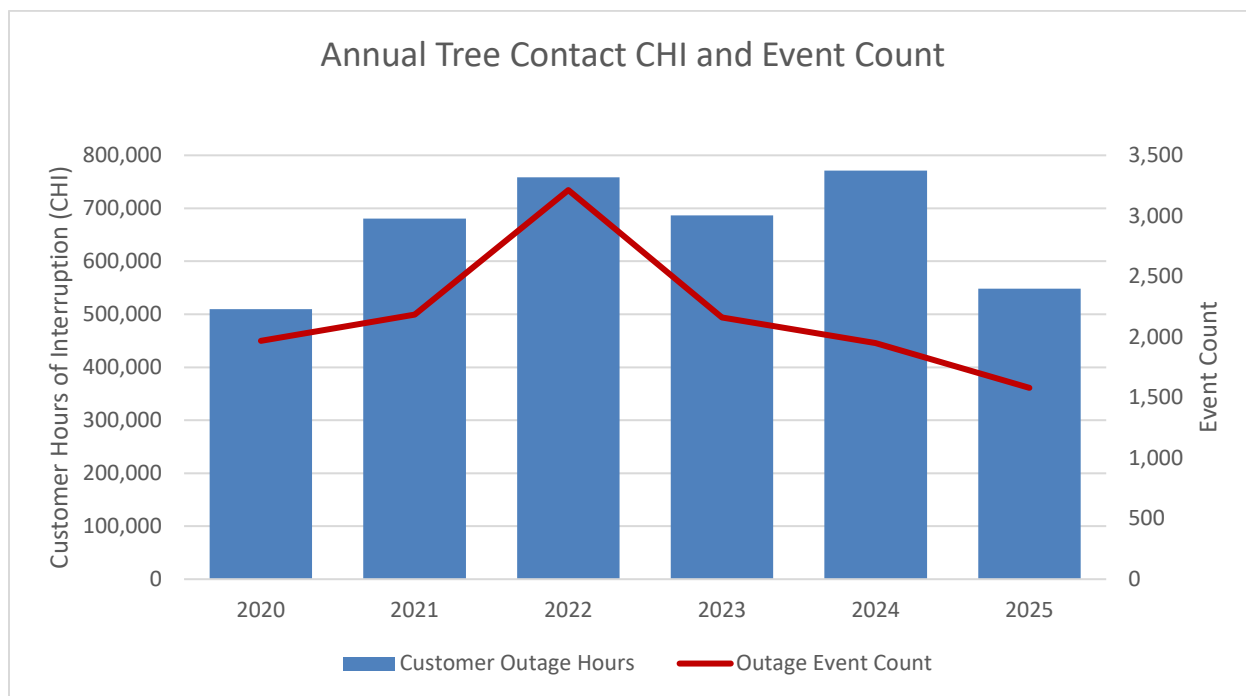
Response IR-28:

Both Figures 29 and 30 in the 2025 Performance Standards report use the same data set of the Performance Standards outages for Annual Tree Contacts and Equipment Failure respectively as 2026 ACE Plan NSEB IR-184 and IR-185. However, NS Power notes that these figures contain values for CHI (customer hours of interruption – that is duration) and event count as reflected in the report text introducing the figures and the figure legends, rather than CI (customer interruptions – that is frequency).

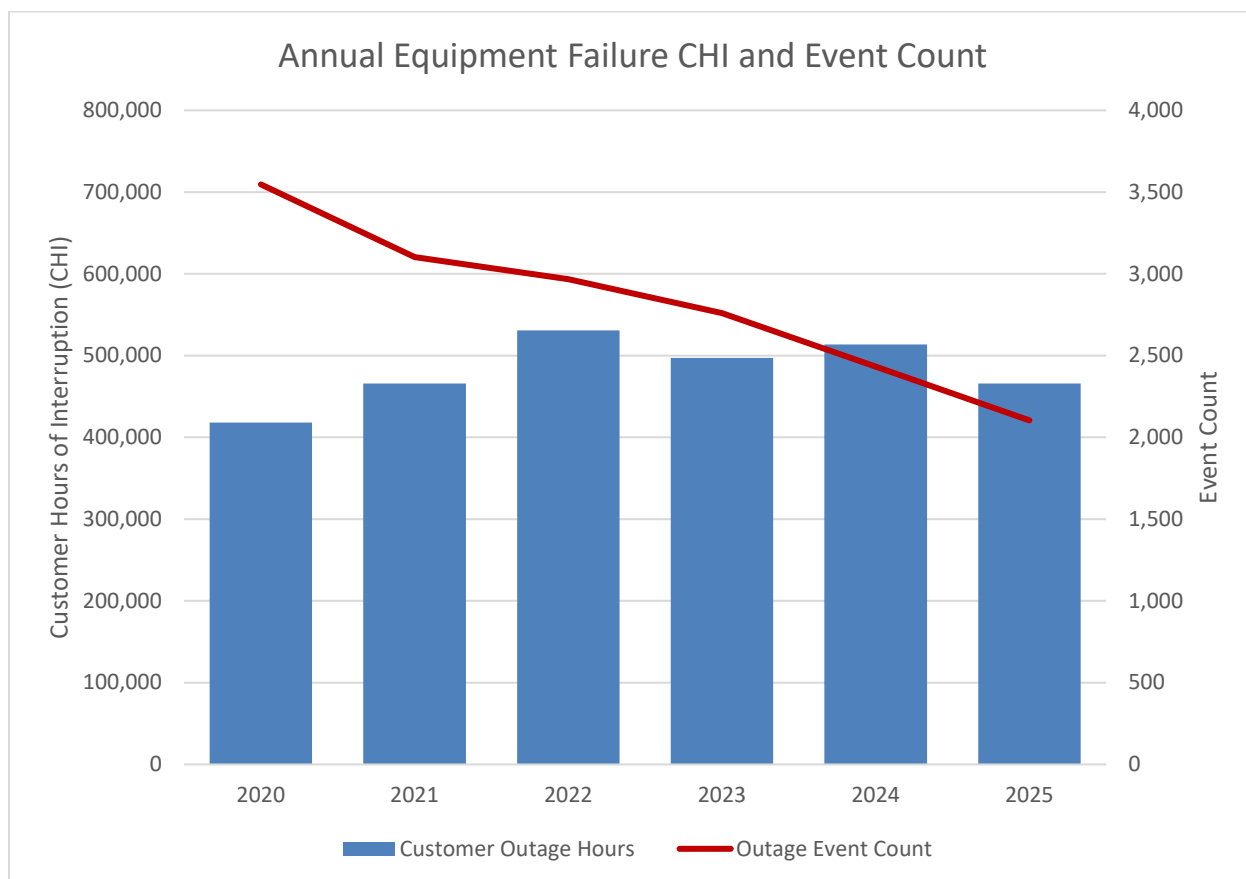
Of note, the figure titles and right-hand Y-axes both contain a typographical error referring to CI and should have read instead as Event Count. The data provided in response to 2026 ACE Plan NSEB IR-184 and IR-185 includes the correct CI and CHI (event count is also included in IR-185) for both cause codes.

Figures 29 and 30 with the correct figure titles and axes labels are provided below.

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1
2



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Request IR-29:

On page 53, the utility notes Figure 30 shows the Equipment Failure outage event count dropping each year and the outage hours being the lowest since 2021.

(a) Please clarify that although customer interruptions reached their lowest level in 2025, customer hours of interruptions remained close to 2021 levels and were higher than in 2020, despite the significantly higher number of interruptions in those years.

Response IR-29:

(a) As noted in M12784 IG IR-2 and M11017 - Exhibits - N-6 - NSPI (NSUARB) RIR-1 to RIR-90, outage frequency investments seeing more immediate impact compared to outage duration investments. When these equipment failure outages do occur, they can take longer to restore due to the nature of the location, coordination and patrolling of the outages.

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Request IR-30:

Page 56 of the report, Figure 32

(a) Please extend Figure 32 to also include the same data for 2016-2025.

Response IR-30:

(a)

Year	Hours ≥80 km/h	Storm Days	Major Event Days	Extreme Event Days	Total Storm Days
2016	93	12	3	2	17
2017	78	6	4	1	11
2018	124	7	6	2	15
2019	178	8	6	2	16
2020	77	3	3	0	6
2021	77	8	0	0	8
2022	205	9	16	3	28
2023	115	5	10	1	16
2024	99	3	0	0	3
2025	99*	2	2	1	5

While not all storm days are wind related, the hours of wind gusts are directionally relevant to the total storm days in a year.

*The 2025 wind gust hours were updated from 93 to 99 after recovering data from a missing weather station.

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1 **Request IR-31:**

2
3 **Regarding Wreck Cove Feeder 85S-401, on page 62 of the report states:**

4
5 **On November 23, 2025 a full outage affected all the customers on 85S-401 for**
6 **2.85 hours. The outage was caused by a transmission-related issue associated**
7 **with generator testing at the Wreck Cove Hydro Generating Station. The**
8 **outage occurred at 5:51 PM and was restored safely at 8:43 PM. The**
9 **interruption resulted from inadvertent effects of testing at the Wreck Cove**
10 **plant's Life Extension and Modernization project and the generator coming**
11 **back online. The underlying issue has since been corrected to prevent**
12 **recurrence.**
13

14 **(a) What was the underlying issue and why did it cause inadvertent effects?**

15
16 **(b) How was the underlying issue corrected?**
17

18 **Response IR-31:**

19
20 **(a) The underlying issue was from planned testing at the Wreck Cove generation station that**
21 **resulted in a protection operation on the substation connected to 85S-401. The protection**
22 **tripped the breaker, including the distribution transformer on the bus, causing 85S-401 to**
23 **experience an outage.**
24

25 **(b) A design change was implemented to prevent reoccurrence.**

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Request IR-32:

The report indicates Wreck Cove Feeder 85S-401 serves approximately 2,266 customers, has 255 kms of distribution poles, and that 45 kms of this line remain off-road. On page 69, the report states that the Wreck Cove Bring-to-Roadside project will relocate

“...approximately 0.4 kms of three-phase distribution on feeder 85S-401 from a cross-country alignment to a roadside location along Route 30 near Wreck Cove.”

The Pleasant Bay Road Widening project will relocate approximately 0.85 kms of this line to roadside. Figure 45 indicates an estimated total cost of \$444,719 for the two projects that will bring approximately 1.25 kms of the line to roadside. Figure 45 also shows that from 2019 to 2026, the utility has spent or will spend a total of \$1,650, 916 on bring-to-roadside projects impacting a total of approximately 5.95 kms of the line (although the Halfway Brook project has a pole replacement component).

- (a) What are the current plans for the remaining 43.75 kms of the distribution line that will still be off-road?
- (b) How does the cost per km of bringing portions of the line to roadside impact future reliability investment decisions?
- (c) How many of the 152 outages in 2025, reported at page 62 of the report, occurred on the off-road portion of the distribution line?
- (d) What impact did these off-road interruptions have on CKAI DI and CKAI FI for this line?
- (e) Did any of the 152 outages in 2025 occur on portions of the line that had been brought to roadside since 2019?

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1 Response IR-32:

2
3 (a) At this time, NS Power is not necessarily planning to relocate all remaining off-road
4 sections of feeder 85S-401 to roadside. Following completion of the 2025 Wreck Cove
5 Bring-to-Roadside project and the planned Pleasant Bay Road Widening project,
6 approximately 43.75 km of the feeder will remain off-road.

7
8 Further bring-to-roadside work on 85S-401 (or on other feeders) is assessed using a
9 targeted, location-specific approach rather than a program to achieve full roadside
10 alignment. A significant portion of the remaining off-road line is located within Cape
11 Breton Highlands National Park and subject to federal jurisdiction, which requires
12 coordination with and approval from Parks Canada for significant work. As a result,
13 projects in these areas are often advanced opportunistically in conjunction with other
14 initiatives, such as road work, that provide suitable access.

15
16 The remaining off-road sections also traverse challenging terrain, including mountainous,
17 coastal, and densely forested areas, where the engineering feasibility and cost of relocation
18 vary considerably. Accordingly, each segment is evaluated individually based on
19 practicability, proximity to road infrastructure, and potential reliability benefit.

20
21 NS Power's current plan for feeder 85S-401 is to pursue a portfolio of complementary
22 reliability investments, including vegetation management, targeted equipment upgrades,
23 and grid modernization such as FLISR. These measures are intended to improve reliability
24 across both roadside and off-road sections, while bring-to-roadside work is advanced
25 selectively in the highest-impact and most practical locations.

26
27 NS Power will continue to assess the remaining off-road sections through inspections,
28 engineering studies, and outage analysis, and will advance projects that meet reliability,
29 feasibility, and cost-effectiveness criteria through the Annual Capital Expenditure Plan
30 process.

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1 (b) Cost is one of several factors considered in NS Power's reliability investment planning;
2 however, it is not evaluated in isolation and a fixed cost-per-km threshold is not applied
3 for bring-to-roadside projects. Costs vary significantly depending on terrain, access
4 conditions, scope of work, and coordination requirements, and are not directly comparable
5 across projects.

6
7 On feeder 85S-401, historical bring-to-roadside projects have ranged from approximately
8 \$40,000 per km to over \$450,000 per km, reflecting site-specific differences in geography
9 and construction complexity.

10
11 In assessing potential locations for these projects, NS Power considers potential
12 improvements in restoration time, the number of customers affected by an outage, and the
13 location of the segment within the feeder. Bring-to-roadside work can materially reduce
14 outage duration by improving access to fault locations, particularly compared to off-road
15 sections that require more time-intensive restoration activities.

16
17 Cost is evaluated alongside these benefits and compared with alternative solutions. Where
18 relocation is not practical or cost-effective, NS Power considers alternative interventions
19 such as vegetation management, equipment upgrades, and grid modernization
20 technologies, including FLISR. Accordingly, bring-to-roadside investments are advanced
21 selectively in locations where most appropriate.

22
23 (c) NS Power's outage management systems record outage events at the level of the protective
24 device that operates (e.g., fuse, recloser, or TripSaver), rather than the precise geographic
25 location of the underlying fault. While field crews determine the fault location during
26 restoration, this information is not consistently captured with sufficient geographic
27 precision to distinguish whether the fault occurred on an on-road or off-road section of the
28 feeder.

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1 In addition, the section of line between two protective devices may include both roadside
2 and off-road segments. As a result, even where the affected device is known, it is not
3 always possible to determine with certainty whether the fault originated on a roadside or
4 off-road portion of that section.

5
6 Accordingly, NS Power cannot definitively attribute each of the 152 outage events on
7 feeder 85S-401 in 2025 to either the on-road or off-road portions of the circuit based solely
8 on system records.

9
10 As shown on the investment map in Appendix J, 41 of the events were attributed to service
11 locations, some of which may be located off-road. The remaining 111 outage events were
12 attributed to 18 protective devices along the feeder. For any given section between these
13 devices, the line may include a combination of roadside and off-road segments, and the
14 precise location of the fault within that section is not captured in a manner that would allow
15 definitive classification.

16
17 (d) As noted in response to part (c), NS Power cannot precisely attribute individual outage
18 events on feeder 85S-401 to on-road or off-road portions of the circuit. As a result, the
19 specific contribution of off-road interruptions to CKAIID and CKAIIF cannot be quantified
20 on a segment-by-segment basis.

21 In considering overall feeder performance, it is also important to note that loss of supply
22 events are not related to the physical location of the distribution line (on-road or off-road).
23 In 2025, loss of supply events contributed 2.85 to CKAIID and 1.00 to CKAIIF for feeder
24 85S-401, and are therefore not attributable to off-road distribution sections.

25 Excluding these events, off-road sections are more likely to influence CKAIID through
26 increased restoration time requirements, although this impact cannot be precisely
27 quantified. The impact on CKAIIF remains less direct, as it reflects the occurrence of
28 outages rather than restoration conditions.

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1 (e) NS Power records outage events at the level of the protective device that operates, rather
2 than the precise geographic location of the fault. As outlined in response to part (c), this
3 limits the ability to definitively attribute outages to specific segments of the feeder.
4 Based on a review of available outage records and the protective devices associated with
5 the 152 outage events in 2025, NS Power does not believe that any outages originated on
6 the specific sections of the feeder that had been brought to roadside as of 2025, including
7 the Cape Smokey (2019), Ingonish Centre (2020), and Wreck Cove (2025) projects.

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Request IR-33:

Page 111 of the report, Figure 80

- (a) Please explain what activities are associated with “switching” planned outages.
- (b) Please explain the differences between planned outages relating to “switching” and those related to “reliability” and why a planned outage was categorized as one or the other for planned outages in 2025.
- (c) Please restate Figure 80 to show planned outage durations by outage type based on customer-hours of interruption.
- (d) Please restate Figure 3 (p. 16 of 115) to highlight the impact of “switching” planned outages on monthly SAIDI.
- (e) Please discuss the impact of “switching” planned outages on NS Power’s failure to meet the SAIDI target and what can be done to mitigate the impact of these planned outages on customer-hours of interruptions.

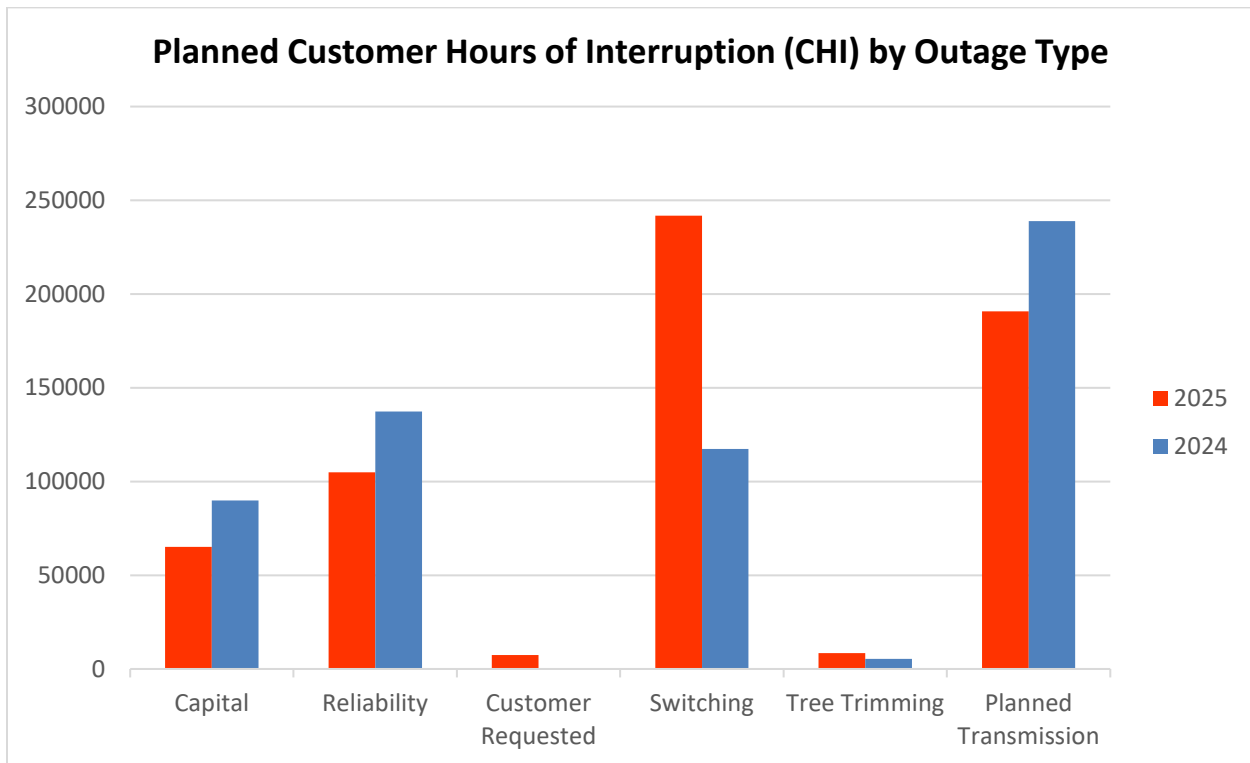
Response IR-33:

- (a) Per the Electricity Canada definition, outages related to Switching are secondary, planned outages which must be taken in order to repair and/or restore a previous outage. For example, in the case where an upstream recloser must be opened by NS Power personnel to isolate a downstream work area to replace a failed device. The initial outage caused by a failed device is considered as a normal outage and coded under Failed Equipment, while the subsequent outage (to previously unaffected customers) caused by opening the recloser is considered a switching outage and coded accordingly.

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(b) Per the Electricity Canada definition, outages related to Reliability are planned outages required to safely maintain and upgrade NS Power's system. In this case, no device failure has occurred, and work is performed to improve performance or prolong the life of system assets. For example, this type of planned outage would include routine work activities such as replacing insulators or re-sagging conductors where de-energization of the equipment may be required to perform the work safely. In contrast to Switching coded events, no other outage event has occurred in the case of a Reliability coded planned outage.

(c) The breakdown of planned outage types by customer hours of interruption (CHI) for 2024 and 2025 is provided in the figure below. A significant portion of the difference between Switching CHI in 2024 and 2025 is due to the impact of wildfire related actions taken in 2025.



(d) As detailed on page 15 of the 2025 Performance Standards Report, planned outages (including Switching and Reliability) are excluded from calculating reliability metrics.

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1 Therefore, these planned events are not included in the calculation of the Performance
2 Standards SAIFI and SAIDI results. As a result, there are no planned switching outages to
3 highlight in Figure 3.

- 4
5 (e) As noted above, switching-related planned outages are excluded from the calculation of
6 SAIDI in accordance with the Performance Standards framework and Electricity Canada
7 definitions. Therefore, switching planned outages did not contribute to NS Power's failure
8 to meet the SAIDI target.

9
10 NS Power acknowledges that planned outages, including those related to switching, do
11 impact customers through customer-hours of interruption. However, planned outages are
12 necessary to safely complete system work, including repairs, maintenance, and reliability
13 improvements.

14
15 NS Power works to mitigate the impact of planned outages on customers wherever
16 possible, including through careful planning and coordination of work, minimizing outage
17 duration and the number of customers affected, and considering operational alternatives
18 that may reduce or avoid outages where feasible. These efforts are intended to balance the
19 need to complete essential system work safely with minimizing impacts to customers.