



Nova Scotia Utility and Review Board

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September 9, 2024

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Dear Ms. Ross:

M11627 – Nova Scotia Power Inc. re 2023 Annual Performance Standards

On March 28, 2024, pursuant to the *Public Utilities Act (PUA, Act)*, Nova Scotia Power Inc. (NS Power) filed its 2023 Annual Performance Standards Report. The Board's Hearing Order dated April 3, 2024, set this matter for review by way of a paper hearing and established a timetable for the proceeding. Information Requests (IRs) from the Consumer Advocate (CA), Small Business Advocate (SBA), and Board staff were issued to NS Power on April 24, 2024, and NS Power filed responses on May 15, 2024. Closing Submissions were filed on June 5, 2024, by the CA, SBA, and NS Power. A Reply to Closing Submissions was filed by NS Power on June 12, 2024.

BACKGROUND

In 2015, the Government of Nova Scotia added ss. 52A to 52F to the *PUA* to include certain performance requirements for NS Power. At that time, s. 52A required the Board to establish performance standards for reliability and the utility's response to adverse weather conditions, while s. 52B required the Board to establish performance standards in respect of "such areas of Nova Scotia Power Incorporated's customer service as it determines appropriate". Sections 52C to 52E addressed reporting on NS Power's performance compared to the standards, and the Board's oversight of NS Power's compliance. This included a requirement for NS Power to file annual reports on its performance about those standards.

In accordance with the *Act*, the Board established performance standards for reliability, response to adverse weather, and customer service. The Board's Order dated December 20, 2016, identified 13 performance standard metrics, as well as targets for those metrics. In its decision in Matter M07387, the Board set a five-year period, ending December 31, 2021, to review the performance standards to ensure they remained relevant and effective.

In its decision about NS Power's 2017 Performance Standards Report (M08574), the Board directed NS Power to expand its reliability reporting in subsequent years to include all-inclusive SAIFI and SAIDI indices, as well as a year-over-year comparative analysis of planned outages.

On October 4, 2021, NS Power filed an application proposing amendments to nine of the thirteen performance standards for implementation in 2022 and a new standard for reports on weather-related outages affecting 30,000 or more customers. This was followed by a Board Order directing that the matter (M10279) proceed by way of a paper hearing and a timetable for that process was provided.

The Board's decision in matter M10279 was issued on February 22, 2022. Following a review of NS Power's revised Compliance Filing, a revised set of performance standards for 2022 to 2026, and related target metrics for 2022, were approved in the Board Order dated April 7, 2022. After analysis of the 2022 performance results (M11052) concluded, those targets remained in effect for 2023, except for CKAIFI and CKAIDI, which are recalculated at the end of each year. The standards and targets for 2023 are noted below:

Reliability

- System Average Interruption Frequency Index (SAIFI) ≤ 2.05
- System Average Interruption Duration Index (SAIDI) ≤ 4.29
- Circuit Average Interruption Frequency Index (CKAIFI) ≤ 5.81
- Circuit Average Interruption Duration Index (CKAIDI) ≤ 16.98

Response to Adverse Weather

- Customer notification of an oncoming severe weather event within 4 hours of opening the Emergency Operations Centre (EOC)
- A minimum of 85% of calls answered within 45 seconds during a severe outage event
- Polite disconnect rate of 10% or less annually for all outage calls
- Estimated Time to Restore (ETR) updates communicated to customers without delay during outages
- Percentage of customers restored within 48 hours of a severe weather event:
 - Extreme Event Days (EEDs) ≥ 78.38%
 - Major Event Days (MEDs) ≥ 91.98%
 - Significant Event Days (SEDs) ≥ 95.05%
- Outage Report for Events Impacting 30,000 Customers or more:
 - File Report Within 45 days of the event, or within 75 days in the case of a MED or EED

Customer Service

- Percentage of calls answered within 30 seconds ≥ 70%
- Percentage of customer bills that can be estimated ≤ 2%
- Customer notification of outages as soon as known to NS Power
- New service connection times
 - Service Installation -- No Poles ≤ 3.0 days
 - Service Installation -- Pole or Transformer ≤ 4.9 days
 - Service Installation -- Temporary to Permanent ≤ 3.2 days
 - Service Installation -- Line Extension less than 10 Poles ≤ 6.2 days
 - Service Installation -- Line Extension ≥ 10 Poles ≤ 18.1 days

Under the *Act*, the Board has authority to take measures to ensure NS Power's compliance with the performance standards, including ordering NS Power to pay an administrative penalty or to develop and file a plan for bringing itself into compliance with a performance standard, or both.

Through amendments to the *PUA* in 2022 (S.N.S. 2022, c. 27), ss. 52A and 52B were repealed and replaced to expand the scope for performance standards and give the Governor in Council additional authority over the establishment of performance standards and the creation of an

advisory council called the Performance Partnership Advisory Table. The scope for performance standards under s. 52A was expanded again in 2024 (S.N.S. 2024, c. 2, s. 76).

Through amendments to the *PUA* in 2023 (S.N.S. 2023, c. 8), the Province repealed s. 52E and substituted new clauses. The substituted clauses, which came into effect upon receiving Royal Assent on April 12, 2023, are stated below:

52E (1) The amount of any administrative penalty to be paid by Nova Scotia Power Incorporated is the amount determined by the Board or prescribed by the regulations to be appropriate in order to promote future compliance with the performance standards and not for a punitive purpose or effect or for redressing a wrong done to society at large.

(2) The cumulative total of administrative penalties levied against Nova Scotia Power Incorporated in a calendar year must not exceed twenty-five million dollars.

(3) Any administrative penalties levied against Nova Scotia Power Incorporated must be credited to customers as prescribed by the regulations.

(4) Where a method of crediting administrative penalties to customers is not prescribed by the regulations, credits to customers may be allocated amongst Nova Scotia Power Incorporated's customers in any manner, in any amount and through any mechanism that the Board determines appropriate.

(5) Nova Scotia Power Incorporated shall not recover any administrative penalty imposed on it under this Section through its rates.

(6) The Governor in Council may make regulations creating a fund to be managed and maintained by Nova Scotia Power Incorporated to serve as a means of holding penalty funds to be paid out to customers.

(7) The exercise by the Governor in Council of the Authority contained in subsection (6) is a regulation within the meaning of the *Regulations Act*.

These amendments significantly increased the cumulative total of administrative penalties that can be levied against NS Power and are applicable to the 2023 annual performance results. Since the method of crediting administrative penalties to customers has not been prescribed by regulations, the allocation, amount, and mechanism is to be determined by the Board as noted in article 52E(4).

PERFORMANCE RESULTS FOR 2023

Based on the results filed in its annual report, NS Power failed to meet its 2023 reliability performance standard targets for SAIFI and SAIDI, as well as four of the five components under the New Service Connection Times standard, as shown below:

- SAIFI -- the system average outage frequency result for 2023 was 2.18, which did not satisfy the target value of ≤ 2.05
- SAIDI -- the system average outage duration result for 2023 was 5.21, which did not satisfy the target value of ≤ 4.29
- New Service Connection Times:

- Service Installation No Pole -- result for 2023 was 3.39 days, which did not satisfy the target value of ≤ 3.0 days
- Service Installation Pole or Transformer -- result for 2023 was 5.67 days, which did not satisfy the target value of ≤ 4.9 days
- Service Installation Temporary to Permanent -- result for 2023 was 3.86 days, which did not satisfy the target value of ≤ 3.2 days
- Service Installation Line Extension less than 10 Poles -- result for 2023 was 7.68 days, which did not satisfy the target value of ≤ 6.2 days.

Other Reporting

In addition to the 14 performance standard metrics established for 2023, NS Power was also required to report on its “all-inclusive” SAIFI and SAIDI results, as well as its performance regarding planned outages.

Although “all-inclusive” SAIFI and SAIDI indices are not formally included as performance standards, these results, which do not exclude outages relating to the most impactful weather events, provide a broader portrayal of overall service levels being experienced by customers. Results for 2023 were 4.97 for SAIFI and 23.03 for SAIDI. Although this was an improvement from the 2022 levels of 5.82 for SAIFI and 74.87 for SAIDI (which included Hurricane Fiona), it is significantly worse than the 2021 results of 2.56 for SAIFI and 5.603 for SAIDI, and the 2020 results of 2.71 for SAIFI and 6.57 for SAIDI.

Regarding planned outages, NS Power was previously directed to include a year-over-year comparison, and to provide a summary of steps taken to reduce the number and duration of planned interruptions. Like the “all-inclusive” SAIFI and SAIDI measures, standards for planned outages have not been formally established.

During 2023, the planned outage indices for SAIFI and SAIDI were 0.56 and 0.62, respectively. The values for 2022 were 0.39 for SAIFI and 0.63 for SAIDI. The number of planned outages increased from 467 in 2022 to 1,938 in 2023. This was attributed to a pause in live line work on lines of 600 volts or less, while NS Power reviewed secondary voltage work practices and methods, following several serious safety incidents. The average duration of planned outages decreased from 2.98 hours in 2022 to 1.97 hours in 2023. In addition, about 56% of customers experienced a planned outage in 2023, compared to 39% in 2022.

NS Power noted that during regular business operations, short outages which are required to facilitate reliability and upgrade work are coordinated with customers in real time and are not coded as planned outages.

Customer-Level Reliability Data

In Matter M10279, the Board directed NS Power to include an update in the 2022 Performance Standards Report on its progress in developing customer-level reliability data. NS Power’s current report includes updated data for 2023:

- For CEMI-5 (Customers Experiencing Multiple Interruptions), 11.4% of customers experienced five or more sustained outages (excluding outages resulting from MEDs, EEDs and planned outages). This is significantly greater than the 2017 level of 6.4% and more than the 5-year average of 10.4%.

- For CEMI-4, 20.2% of customers experienced four or more sustained outages (excluding outages resulting from MEDs, EEDs and planned outages). This is significantly greater than the 2017 level of 12.7% and more than the 5-year average of 19.6%.
- For CELID-8 (Customers Experiencing Long Interruption Duration), 31.2% of customers experienced eight cumulative hours of interruption in 2023 (excluding outages resulting from MEDs, EEDs and planned outages). This is also greater than the 2017 level of 27.1% and the 5-year average of 29.3%.

NS Power considers the CEMI and CELID performance levels to be preliminary values while a baseline is being developed for comparison.

COMMENTS BY THE CA AND THE SBA

In his comments, the CA noted that NS Power failed to meet the SAIFI and SAIDI targets in 2023, with performance levels being basically the same as those reported in the 2022 Annual Performance Report. In addition, NS Power failed to meet four standards for service installations, three of which were the same as in 2022 (i.e., pole or transformer, temporary to permanent, and line extension).

The CA stated that the Board should again encourage NS Power's compliance with its performance standards by assessing an administrative penalty under the *Public Utilities Act*. He reasoned that previous penalties did not have the desired effect since NS Power continues to miss the same targets for reliability and customer service year after year. Referencing the Board's previous statement that continued non-compliance with performance standards as a normal occurrence is not acceptable, he suggested that the Board's message should be reinforced by imposing an administrative penalty of \$1.5 million.

Referencing performance standards as an incredibly important matter, the SBA noted that neither the SAIFI nor SAIDI targets were achieved in 2023, and four of the Customer Services responses also missed their targets. He noted that once again, NS Power referred to increased winds, which are the same explanations that NS Power has been stating for several years, and that "At some point NSPI has to take responsibility for not meeting their targets."

The SBA expressed concern that in the 7th year following implementation of Performance Standards, the SAIDI result is 1.50 times the original result from 2017 (and 1.31 times the result in 2020). However, NS Power stated that "SAIDI and SAIFI results demonstrate a steady advancement over the years, underscoring the effectiveness of maintenance and operational strategies".

Similarly for SAIFI, seven years after Performance Standards were implemented, the results are higher than in the 2017 initial year.

The SBA highlighted NS Power's claim that high winds and more extreme weather are becoming the normal state, but recent reliability upgrade investments enabled SAIDI and SAIFI performance levels to remain relatively stable. He submitted that claiming the results could have been worse does not relieve NS Power from being held accountable for its results in this Performance Standards Report.

The SBA also noted that although NS Power referred to a "robust five-year reliability plan", it has not provided an actual written plan. He concluded that this is the third year in a row that NS Power

missed achieving the SAIFI and SAIDI targets, and NS Power needs to be held accountable for failing to meet the Performance Standards.

BOARD ANALYSIS OF RESULTS

In assessing NS Power’s performance results for 2023, the Board finds it helpful to review previous results and trends experienced from the time the standards were initially established in 2017. That information is presented in the following tables and was extracted from reports filed by NS Power.

i) Reliability Performance

Table 1 – Overall System Reliability Performance

	TARGET	ACTUAL
SAIFI		
2017	2.05	1.73
2018	2.05	2.00
2019	2.05	2.58
2020	2.05	2.05
2021	2.05	2.27
2022	2.05	2.19
2023	2.05	2.18
SAIDI		
2017	4.29	3.40
2018	4.29	4.43
2019	4.29	5.99
2020	4.29	3.98
2021	4.29	5.23
2022	4.29	5.16
2023	4.29	5.21

Table 1 presents NS Power’s annual system-wide SAIFI and SAIDI reliability performance indices, excluding MEDs, EEDs, and planned outages. The results show a deteriorating trend in the initial years. Targets were achieved in 2020, but performance failed to meet the targets in the following years. Due to insufficient improvement, the targets remained constant at the level initially established in 2017.

All-Inclusive SAIFI and SAIDI

All-Inclusive SAIFI and SAIDI indices provide a broader perspective of the customer outage experiences. From an outage frequency and duration perspective, customer experiences initially deteriorated, but then improved in 2020 and 2021. That improvement is likely due to no EED events occurring during 2020 or 2021, and no MED events occurring in 2021. However, storm events in 2022, particularly Hurricane Fiona, resulted in greatly deteriorated results in 2022. Performance improved in 2023 but remained significantly worse than initially experienced in 2017.

Table 2 – All-Inclusive SAIFI and SAIDI Results

	All-In SAIFI	All-In SAIDI
2017	2.81	8.57
2018	4.56	16.26
2019	4.52	43.88
2020	2.71	6.57
2021	2.56	5.603
2022	5.82	74.87
2023	4.97	23.03

Planned Outages

Like the All-Inclusive classification, planned outages are not formally included as approved performance standard metrics. However, this information provides valuable insight into operational activities and potential opportunities to improve overall outage performance

Table 3 -- Planned Outages

	Number of Planned Outages	Average Customers per Planned Outage	Percentage of Customers Experiencing a Planned Outage	Average Duration per Outage (hr)
2017	429	409	35%	2.3
2018	420	354	29%	1.9
2019	402	356	28%	3.34
2020	490	257	24%	2.76
2021	572	258	28%	2.59
2022	467	440	39%	2.98
2023	1,938	147	56%	1.97

It should be noted that the above durations are averages for planned outage events, regardless of the number of customers affected, which is different from the system duration index SAIDI. Table 3 shows a large increase in the number of planned outages and in the percentage of customers experiencing a planned outage during 2023. As previously noted, NS Power attributed this increase to a pause in live line work on lines of 600 volts or less, while it reviewed secondary voltage work practices and methods, following several serious safety incidents.

Distribution Circuit Performance

At the end of 2022, NS Power identified three problem circuits based on their outage frequency performance, and two problem circuits based on their outage duration performance.

The benchmarking methodology for CKAIFI and CKAIDI states that any circuit that is among the worst 5% of all NS Power's circuits for two consecutive years shall be labeled as a "problem circuit". Any problem circuit that is among the worst 5% of all NS Power's circuits for the third consecutive reporting year shall be labeled a "chronic circuit".

If the CKAIFI or CKAIDI value of a chronic circuit in a given year is greater than the average CKAIFI or CKAIDI value plus two standard deviations across all NS Power circuits in the same year, then the benchmark would not have been met, and NS Power could be subject to a penalty.

During 2023, Keltic Drive circuit 11S-411 ranked among the worst 5% in outage duration (CKAIDI) performance for a third consecutive year and became a chronic circuit. However, its performance index of 16.87 was slightly better than the target of 16.98, so it avoided any compliance issue related to it.

The following table provides an annual listing of the problem circuits.

Table 4 – Annual Listings of Problem Circuits

	2017	2018	2019	2020	2021	2022	2023
CKAIFI	Weymouth 16V-314	Pugwash 7N-302	Wreck Cove 85S-401	Wreck Cove 85S-401	Wreck Cove 85S-401	Port Hastings 2C-402	Bridge Ave 62N-413
	Pt. Tupper 1C-411	Whycocomagh 67C-411	Upper Burlington 18V-413	Upper Musquodoboit 88H-402	Ruth Falls 96H-412	Dickie Brook 24C-442	Cleveland 22C-402
	North Sydney 3S-301		SW Margaree 58C-403	SW Margaree 58C-403	Port Hastings 2C-402	St Peter's 59C-402	Keltic Drive 11S-411
	Trenton 50N-410		Martins Brook 78W-302		St Peter's 59C-402		
					Middlefield 91W-411		
CKAIDI	Weymouth 16V-314	Wreck Cove 85S-401	Wreck Cove 85S-401	Wreck Cove 85S-401	Upper Musquodoboit 88H-402	Cape Porcupine 100C-421	Cleveland 22C-402
	Wreck Cove 85S-402	Wreck Cove 85S-402	Wreck Cove 85S-402	Upper Musquodoboit 88H-402	Whycocomagh 67C-411	Whycocomagh 67C-411	Keltic Drive 11S-411
	Weymouth 16V-315	Port Hastings 2C-402	Upper Burlington 18V-413	Aberdeen 9C-303	Wreck Cove 85S-401	Dickie Brook 24C-442	
	Parrsboro 37N-312			Whycocomagh 67C-411	Ruth Falls 96H-412	Conway 77V-401	
			Parrsboro 37N-413	Parrsboro 37N-413	Upper Musquodoboit 88H-401	Port Hastings 2C-402	
						Keltic Drive 11S-411	

The results achieved in 2023 are shown in the following two Figures as presented in NS Power's annual report:

Figure 41 – 2023 CKAIFI Results

	Top 5% 2023	2023 Ranking* (Percentage)	2023 CKAIFI Result	2023 Target**
62N-413	No	91.0	4.77	5.81
22C-402	No	77.7	2.97	5.81
11S-411	No	94.0	5.32	5.81

Feeders with a rank of 95-100 percent are ranked in the top 5th percentile of worst-performing feeders in 2023.
 ** The 2023 target reflects the average of the CKAIDI/CKAIFI values for the year plus two standard deviations.

Figure 40 – 2023 CKAIDI Results

	Top 5% 2023	2023 Ranking* (Percentage)	2023 CKAIDI Result	2023 Target**
11S-411	Yes	95.78	16.87	16.98
22C-402	No	81.9	8.11	16.98

ii) Response to Adverse Weather

NS Power’s customer restoration performance results regarding Significant Event Day (SED), Major Event Day and Extreme Event Day storms for 2023 and the six previous years are summarized in Table 5 below. Except for the 2022 impact from Hurricane Fiona, NS Power was able to satisfy the SED, MED, and EED restoration performance targets in each year.

Table 5 – Annual Service Restoration During SEDs, MEDs and EEDs

	TARGET	ACTUAL
SED		
2022	95.05%	85.48% (1 event day)
2023	95.05%	No events
MED		
2017	86.5 %	99.31% (4 event days)
2018	87.44%	99.86% (6 event days)
2019	88.41%	90.93% (6 event days)
2020	88.41%	98.45% (3 event days)
2021	88.41%	No events

2022	91.98%	74.88% to 100% (16 event days)
2023	91.98%	94.87% to 99.99% (9 event days)
EED		
2017	65.3 %	98.41% (1 event day)
2018	66.28%	99.9% (2 event days)
2019	68.71%	76.06% (2 event days)
2020	68.71%	No events
2021	68.71%	No events
2022	78.38%	60.98% to 82.67% (3 event days)
2023	78.38%	96.40% (1 event day)

iii) Customer Service

There are four primary customer service performance standards established in the customer service category. Those are:

- Percentage of calls answered within 30 seconds
- Percentage of customer bills that can be estimated
- Customer notification of outages
- New service connection times, which includes five separate performance targets.

As stated in previous Board decisions, although the customer service targets are established as annual targets, the Board expects NS Power to work towards achieving the target levels during each month of the year, not just on a 12-month basis. During 2023, NS Power was able to achieve its annual performance targets in the first three customer service standards listed above. However, when considering performance during each individual month, the results during October for the “Percentage of calls answered within 30 seconds” fell below the annual target level.

In the fourth customer service standard (New service connection times), NS Power failed to satisfy the established annual targets in four of the five components, as well as during several months of the year. For example,

- New Service Connection Time (no poles) was not achieved in January, September, and October
- New Service Connection Time (pole or transformer) was not achieved in January, March, June, July, August, September, October, November, and December
- New Service Connection Time (temporary to permanent) was not achieved in January, March, April, May, June, July, and August
- New Service Connection Time (line extension <10 poles) was only achieved in January, but not in any of the other eleven months.
- New Service Connection Time (line extension ≥ 10 poles) was not achieved in March, May, and December.

Results for 2023 and the previous six years are shown in Table 6 below.

Table 6 – New Service Connection Performance (Days)

		TARGET	ACTUAL
2017	No Poles	2.8	2.2
	Pole or Transformer	5.9	4.2
	Temporary to Permanent	2.9	2.3
	Line Extension <10 Poles	8.8	5.2
	Line Extension ≥10 Poles	31.7	12.1
2018	No Poles	2.4	2.0
	Pole or Transformer	5.2	4.0
	Temporary to Permanent	2.8	2.1
	Line Extension <10 Poles	7.4	5.1
	Line Extension ≥10 Poles	26.9	12.2
2019	No Poles	2.4	2.3
	Pole or Transformer	5.2	4.6
	Temporary to Permanent	2.8	2.5
	Line Extension <10 Poles	7.4	6.3
	Line Extension ≥10 Poles	26.9	21.5
2020	No Poles	2.2	2.1
	Pole or Transformer	4.4	4.3
	Temporary to Permanent	2.8	2.6
	Line Extension <10 Poles	5.8	5.6
	Line Extension ≥10 Poles	25.8	14.6
2021	No Poles	2.2	2.18
	Pole or Transformer	4.4	4.39
	Temporary to Permanent	2.5	2.41
	Line Extension <10 Poles	5.8	5.45
	Line Extension ≥10 Poles	25.8	9.70
2022	No Poles	3.0	2.98
	Pole or Transformer	4.9	5.09
	Temporary to Permanent	3.2	3.73
	Line Extension <10 Poles	6.2	6.38
	Line Extension ≥10 Poles	18.1	12.02
2023	No Poles	3.0	3.39
	Pole or Transformer	4.9	5.67
	Temporary to Permanent	3.2	3.86
	Line Extension <10 Poles	6.2	7.68
	Line Extension ≥10 Poles	18.1	14.12

FINDINGS

This past year is the seventh consecutive year that NS Power failed to meet one or more of its performance targets.

- In 2017, one of the targets, CKAIID, was not achieved.
- In 2018, two of the performance targets, SAIDI and CKAIID, were not achieved.
- In 2019, performance further deteriorated to the point that six targets were not achieved. Those metrics were SAIFI, SAIDI, CKAIIF, CKAIID, Percentage of (regular business) calls answered within 30 seconds, and Percentage of customer bills that can be estimated.
- In 2020, NS Power failed to achieve two of its performance standards, CKAIID and the Percentage of customer bills that can be estimated.
- In 2021, the four reliability targets, SAIFI, SAIDI, CKAIIF, and CKAIID were not achieved.
- In 2022, three reliability targets, SAIFI, SAIDI, and CKAIID as well as one customer service target and one adverse weather target were not achieved.
- In 2023, two reliability targets, SAIFI and SAIDI, and four of the five components in the New Service Connection Times customer service standard were not achieved.

As was the case in previous years, NS Power continues to point to increasing weather challenges and the increasing frequency and intensity of storms as the reason for failing to achieve its reliability and customer service targets. Its failure to meet the New Service Connection targets was attributed to the volume of work orders and the challenge of resource availability. NS Power stated that the forecast level of work volume for 2024 is almost double that of five years ago. The chart presented in Figure 8 in the report shows that the volume of work for powerline technicians was not a sudden unexpected occurrence but was steadily increasing each year since 2019.

There is no doubt that more severe weather conditions have been experienced in recent years, and the amount of damage caused by those events is becoming more extensive. This was noted by the Board in its prior performance reviews. Last year, the Board highlighted that despite the changing climate, the need for a reliable electrical grid is likely more important than ever, considering an increasing trend towards electrification and the urgent need to rapidly decarbonize. Furthermore, the Board noted that if more frequent and damaging storms are becoming the new normal, NS Power needs to ensure that its performance, not just its investment plans, keeps up with those changes.

In defending its performance, NS Power explained the steps it has taken to achieve improved results. Those steps included establishing a dedicated reliability team, increased capital investment, increased investment in vegetation management, upgrades to feeders and equipment, utilizing updated technology and innovation, and proactively engaging in stakeholder outreach and collaboration.

In its report and IR responses, several references were made to storm hardening initiatives, which include using higher class poles and stronger insulators with a clamp-style attachment to support overhead conductors. When asked in NSUARB IR-10 to identify the areas and percentage of the province that were storm hardened, NS Power stated: "It is not possible to quantify the overall percentage of the province that has been storm hardened because the targets of storm hardening initiatives are constantly evolving." That response does not instill confidence in NS Power's planning or management of storm hardening initiatives.

Regarding the dedicated reliability team, NS Power noted that the team consists of almost 60 employees. New roles include a Director of Reliability and four Reliability Advisors. Except for one

external hire, all others are existing NS Power employees. The reliability team's focus is on executing an enhanced five-year reliability investment plan, implemented in 2023, and ensuring the plan is aligned with customer feedback and needs. In NSUARB IR-7, NS Power was asked to provide a copy of the enhanced five-year plan. In response, it provided a breakdown of spending by investment type for each year and stated that details of investments are included in the corresponding ACE Plan filings. In its IR-6, the SBA asked if NS Power intended to establish a long-term investment plan against which progress in achieving the goals of the dedicated reliability team can be tracked. The response stated that investments will be included in ACE Plan filings and "are not anticipated to be captured in a separate report". The Board is concerned that without a separate documented five-year plan, it will be difficult to track and measure progress and accountability.

On the issue of vegetation management, page 70 of the report states that NS Power established plans to further increase investment in vegetation management to \$45 million (capital and OM&G) in 2024 and to stay at that level for the next four years. That plan includes 44 unique feeders and over 1,500 km of distribution and transmission line scheduled to be addressed in 2024. In response to NSUARB IR-26, those feeders and transmission lines were identified, along with their ranking on the worst performing list. Work associated with the next four years was not specified in the report. However, the reliability focus and next steps beginning in 2024 were briefly listed on page 72 of the report. Those steps include feeder inspections, advancing work orders, executing the work, conducting proactive customer engagement sessions, increasing investments, and tracking results. The Board believes that it would be beneficial to have more detail about NS Power's plan for the annual \$45 million expenditure over the next four years.

The Board recognizes that NS Power has taken measures to improve its performance in satisfying established standards and targets. Despite those efforts, and aside from certain year-over-year improvements, the expected results have not been achieved. The fundamental outcome anticipated from establishing performance standards is to produce continuous improvements in reliability, response to adverse weather, and customer service. SAIFI and SAIDI targets have not been met for three consecutive years, certain customer service targets have not been met for two consecutive years, and there has not been a single year since establishing the standards in 2017 that NS Power has been able to satisfy all of the performance standards.

On page 28 of its 2024 ACE Plan Decision, the Board stated:

[77] Questions from the Board and Intervenors remain as to whether NS Power is investing enough in the right things to fundamentally improve reliability and the ability of the system to withstand more severe weather events.

[M11458, Decision]

That statement also applies in this performance standards review.

Related concerns were also expressed in the recent inquiry into the extent, condition and value of NS Power's property and assets (Matter M11067). That review, undertaken by Board Counsel Consultant EA Technology, produced eleven asset management recommendations for action by NS Power. Specific recommendations which could facilitate NS Power's ability to improve reliability performance include:

- It is recommended that Nova Scotia Power develops a strategic asset management plan.

- It is recommended that Nova Scotia Power develops and implements a process that reviews actions resulting from risks and opportunities, to determine whether they have been effective.
- It is recommended that Nova Scotia Power develops and implements a process that reviews the asset management plans.
- It is recommended that the planned review of the 'engineering controls for plant modifications' document should include Transmission and Distribution assets.
- It is recommended that Nova Scotia Power should include a risk assessment process within its 'engineering controls for plant modifications' document that considers potential risks associated with any change.
- It is recommended that Nova Scotia Power develops and implements an internal audit process that aligns to the requirements of ISO55001:2014.

In Matter M11458 about the 2024 ACE Plan, the SBA's Closing Submission appeared to take issue with the lack of transparency around NS Power's long-term resiliency plan:

While it is positive that NSPI has a plan, without understanding exactly what, where or how the projects are to be carried out, there is little ability to know if the plan is being followed. As a result, stakeholders and ratepayers are limited in their ability to assess whether the projects being proposed align with a longer-term plan; how the results reflect whether the plan was completed as intended; and whether NSPI's inability to achieve its targets (as described in the annual Performance Report) is due to a failure to successfully carry out the plan, or is due to issues beyond NSPI's control.

[M11458 SBA Closing Submission, p. 2]

In his Closing Submission in the current performance standards matter, the SBA noted "...NSPI has referred to a "robust five-year reliability plan" but has not provided an actual written plan. It is essential for stakeholders to understand what NSPI plans to do in terms of reliability from a medium to long term view to understand why targets are not being met."

Furthermore, as noted by the Consumer Advocate in his Closing Submission, "Three times in the recent past, the Board has imposed administrative penalties...**Those penalties...have not had the desired effect.**" [Emphasis added]

During previous performance standard reviews, the Board emphasized that customers are entitled to receive an appropriate level of service for the rates and fees they are charged by the utility. It is not acceptable that non-compliance of the performance standards has become a normal occurrence for NS Power.

On page 12 of its report, NS Power stated: "The Performance Standards are a key part of our accountability to customers in NS and part of the system of strong regulatory oversight." On page 21 of its report, NS Power stated that it "...welcomes Performance Standards as part of the strong regulatory oversight of the business. Performance Standards provide the transparency and accountability that customers deserve." On page 138 of its report, NS Power stated that it "...is committed to meeting the Performance Standards as established by the Board. NS Power takes its responsibility to provide a safe, reliable power system as paramount and understands the importance of balancing investments while ensuring the lowest cost for customers."

At the core of the Board's statement in last year's performance standards decision that NS Power needs to ensure that its performance, and not just its investment plans, keep with changing weather patterns, was a need for NS Power to demonstrate it is investing its efforts and capital where it would be most beneficial for reliability and resiliency. This concern gave rise to the Board's

direction to NS Power in February 2023 to develop a Climate Change Adaptation Plan to be filed with the Board no later than the end of 2025 to, in part, enhance NS Power's capital expenditure process. It was also the basis for the Board's direction to NS Power in March of this year to develop and implement a process that reviews actions resulting from risks and opportunities, to determine whether they have been effective.

In Matter M11169 about NS Power's request for authorization to overspend on 2022 ACE Plan Distribution Routines D008 – Provincial Storm, the Board concluded in its decision that more information was needed about NS Power's resiliency investments:

...NS Power needs to develop better metrics and analysis to evaluate the cost-effectiveness of resiliency investments. These should be capable of both quantifying the expected benefits of a resiliency investment and measuring the effectiveness of that specific intervention once it is in place. The Board directs NS Power to consider this issue and provide a report to the Board in its 2025 ACE Plan application.

[Decision, 2024 NSUARB 115, para. 64]

Although NS Power appears to recognize its core accountability in providing reliable service to its customers, and has taken certain steps to improve its performance, it is the Board's view that progress in addressing reliability issues, increasing volume of work, and skilled internal resource requirements has been lagging. More needs to be done and with greater urgency. Furthermore, despite the Board's prior directions around the need to assess the effectiveness of the investments in reliability and resiliency it is making, the information NS Power provided in its IR responses in this proceeding does not engender confidence that this is being addressed by NS Power. For example, in its response to NSUARB IR-18(b), NS Power advised that it does not look specifically at the reliability impacts of individual projects because it regards its asset risk profiles as the primary measure of the impact from its investments. The Board finds this response not entirely consistent with its direction in s. 3.3.1 of its decision in 2024 NSUARB 59 relating to EA Technology's Recommendation 6: "R6. It is recommended that Nova Scotia Power develops and implements a process that reviews actions resulting from risks and opportunities, to determine whether they have been effective." In that decision, the Board stated, at paragraph 60:

Based on NS Power's responses to the recommendations and IRs in this proceeding, the Board finds that EA Technology's recommendation that NS Power develop and implement a process that reviews actions resulting from risks and opportunities to determine whether they have been effective is a fair one. While the Board finds that the information NS Power provided in this proceeding continues to demonstrate an approach to identifying assets at risk through active monitoring and the use of key performance indicators (including assets that were subject to actions resulting from risks and opportunities), there is little, if any, information about how NS Power evaluates the effectiveness of the specific actions that it has undertaken. The Board therefore directs NS Power to develop and implement a process that reviews actions resulting from risks and opportunities to determine whether they have been effective or could be improved. NS Power's actions to comply with this directive must be addressed in the action plan update described later in this decision.

The Board agrees that a comprehensive written version of NS Power's five-year reliability plan is needed to understand how service improvements will be achieved and against which progress in achieving the performance goals can be tracked. This plan must include specific actions and related timing, demonstrate why these specific investments were selected and quantify the level of reliability or resilience improvement expected from each investment. The Board directs NS Power to prepare such a plan, which is **to be filed by December 31, 2024**.

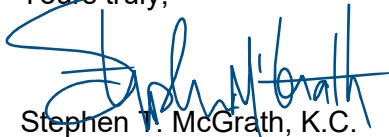
Further, the Board does not accept NS Power's statement that "...an administrative penalty would only serve to adversely impact NS Power's already challenging financial position and serve to hinder future investment". On the contrary, while the Board must assess whether imposing an administrative penalty may have a punitive impact on NS Power because of its current financial circumstances, it considers that directing NS Power to develop and file a comprehensive five-year reliability plan, as well as levying an administrative penalty, is warranted to promote future compliance with the performance standards.

Given that performance failures and insufficient progress has continued in 2023, and that the Board has concerns about the extent to which NS Power is moving forward with its directions to assess the effectiveness of the investments it is making in reliability and resiliency, the Board has determined that an administrative penalty in the amount of \$1,250,000 is warranted to emphasize the urgency for NS Power to comply with all the established performance standards and targets. As stipulated in the Act, NS Power "shall not recover any administrative penalty imposed on it under this Section through its rates". The penalty amount is to be credited to customers under the FAM mechanism no later than October 31, 2024.

PERFORMANCE TARGETS for 2024

Performance standards and targets for the 2022 to 2026 period were established in matter M10279. However, certain targets require annual updating. Accordingly, updated targets for 2024 are noted in Attachment 1.

Yours truly,



Stephen W. McGrath, K.C.
Chair



Roland A. Deveau, K.C.
Vice Chair



Steven M. Murphy, MBA, P.Eng.
Member

c: William Mahody, K.C., Board Counsel
Participants M11627

Attachment

Attachment 1 – 2024 Performance Standards

Metrics	Targets
Reliability	
System Average Interruption Frequency Index (SAIFI)	≤2.05
System Average Interruption Duration Index (SAIDI)	≤4.29
Circuit Average Interruption Frequency Index (CKAIFI)	Albert Bridge 57S-401 Wreck Cove 85S-401
Circuit Average Interruption Duration Index (CKAIDI)	Upper Lake Falls 1W-411 Tatamagouche 4N-313 Keltic Drive 11S-411 Albert Bridge 57S-401 Middlefield 91W-411
Response to Adverse Weather	
Customer notification of an oncoming severe weather event within a specific time frame	Within 4 hours of opening Emergency Operations Centre (EOC) (fixed for 2022 to 2026)
Percentage of calls answered within 45 seconds during a severe outage event	85% (fixed for 2022-2026)
Polite disconnect rate for all outage calls	10% or less (fixed for 2022-2026)
Estimated Time to Restore (ETR) updates communicated to customers during an outage	Provided without delay (fixed for 2022 to 2026)
Outage Report for >30,000 customers	Within 75 days for an EED or MED and 45 days for an SED
Percentage of customers restored within 48 hours of a severe weather event ➤ Significant Event Days (SEDs) ➤ Major Event Days (MEDs) ➤ Extreme Event Days (EEDs)	95.05% 91.98% 78.38%
Customer Service	
Percentage of calls answered within 30 seconds	70% (fixed for 2022 to 2026)
Percentage of customer bills that can be estimated	No more than 2% (fixed for 2022 to 2026)
Customer notification of outages	As soon as known by NS Power (fixed for 2022 to 2026)
New service connection times ➤ Service Installation -- No Poles ➤ Service Installation -- Pole or Transformer ➤ Service Installation -- Temporary to Permanent ➤ Service Installation -- Line Extension less than 10 Poles ➤ Service Installation -- Line Extension greater than or equal to 10 Poles	≤3.0 days ≤4.9 days ≤3.2 days ≤6.2 days ≤18.1 days