CANADIAN NIAGARA POWER INC.
A FORTIS ONTARIO Company

CANADIAN NIAGARA POWER INC.
TRANSMISSION

CUSTOMER DELIVERY POINT
PERFORMANCE STANDARDS

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1 Introduction

Canadian Niagara Power Inc. ("CNPI") Tx has prepared this Customer Delivery Point Performance Standard ("CDPPS") in accordance with the Transmission System Code, Section 4.5 Performance Standards; specifically Section 4.5.1 reproduced below:

> *A transmitter shall develop performance standards that apply at the customer delivery point level and that:*
>
> *(a) reflect typical transmission system configurations that take into account the historical development of the transmitter's transmission system at the customer delivery point level;*
>
> *(b) reflect historical performance at the customer delivery point level;*
>
> *(c) are, where applicable, consistent with the comparable performance standards applicable to all delivery points throughout the transmitter's transmission system;*
>
> *(d) establish acceptable bands of performance at the customer delivery point level for transmission system configurations, geographic area, load, and capacity levels;*
>
> *(e) establish appropriate triggering events to be used to initiate technical and economic evaluations by the transmitter and its customers regarding performance standards at the customer delivery point level, as well as the circumstances in which any such triggering event will not require the initiation of a technical or economic evaluation;*
>
> *(f) establish the steps to be taken based on the results of any evaluation that has been so triggered, as well as the circumstances in which such steps need not be taken; and*
>
> *(g) establish any circumstances in which the performance standards will not apply.*

2 Aspects of CNPI Tx's Transmission System

Description of CNPI Tx's transmission system Customer Delivery Points:

I. The CNPI transmission system has only two Customer Delivery Points (CDPs).

II. The Customer Delivery Points are owned and operated by CNPI's transmission business unit ("CNPI Tx").

III. Both Customer Delivery Points are supplied by CNPI Tx's radial 115kV transmission system.

IV. CNPI Tx's 115 kV transmission system is an extension to the Hydro One Networks Inc.'s ("HONI") 115 kV transmission system with the common point of coupling at HONI's transmission station in Niagara Falls, Canada.

V. Both Customer Delivery Points serve the same customer: the portion of CNPI's distribution business unit serving the Fort Erie service territory.

These aspects of CNPI Tx's transmission system influence the CDPPS; specifically:

I. CNPI Tx's transmission system is a radial extension of HONI's transmission system and therefore its performance can be highly dependent upon the performance of HONI's transmission system. For this reason, the performance targets will be set both independently of HONI's system, and also taking into account the total performance of the transmission systems of CNPI Tx and HONI with respect to CNPI's two CDP.

II. With only two Customer Delivery Points there is very small sample to perform statistical analysis on historical results. Therefore, performance targets based purely on outage events 'internal' to CNPI Tx's system will be subject to a high degree of year-over-year volatility.

III. At CNPI, a one-to-one relationship exists between the transmitter and the customer. A common management and operations team affords each party with an intimate understanding of the respective business units, i.e., transmitter and distributor.

3 Performance Targets

CNPI Tx uses the performance targets in this section to establish threshold levels of acceptable performance before an evaluation of the affected CDP is mandated. CNPI Tx may choose to conduct a performance review when actual values are still within these target values, but any CDP performance outside of these thresholds will require an evaluation.

The values in sections 3.1 and 3.2 define the performance targets to identify when a CDP is an 'Outlier'. That is, whenever the short-term performance at a CDP becomes worse than a particular threshold value.

Section 4 of this documents outlines when and how CNPI Tx determines when the long-term reliability performance of a CDP might also trigger an evaluation.

3.1 CNPI Tx Internal Targets for Outlier Determination (Trigger 1)

As detailed in Section 2 of this CDPPS, CNPI Tx's transmission system is relatively small with only two delivery points serving a single customer. As a result, there is limited data available to perform statistical analysis.

For the time being, CNPI Tx has chosen the targets shown below in Table 1 based on available historical data[1] to ensure that a reliability investigation is triggered whenever the CNPI Tx system's outage performance in any one year exceeds the internal thresholds shown below (i.e. excluding loss-of-supply events from HONI).

Table 1: CNPI Internal Delivery Point Performance Targets based on Load Size

Performance Measure	**Delivery Point Performance Target (CNPI Tx Outages Only)** (Based on a Delivery Point's Total Average Station Load)			
	0 to 15MW		>15 to 40 MW	
	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance
DP Frequency of Interruptions (Outages/year)	N/A	N/A	0.7	1.74
DP Interruption Duration (minutes/year)	N/A	N/A	31	73.0

There are no Customer Delivery Points on CNPI Tx's transmission system with a recent average load less than 15MV or greater than 40MW.

[1] Based on actual CNPI Tx system performance from 2009 to 2013. The historical data for 2012 was adjusted to match the estimated impact if all outages had occurred when the IPL was available. Minimum Standard equals the 5-year average performance plus one standard deviation of performance variability.

3.2 CNPI Tx Total Targets for Outlier Determination (Trigger 2)

For this section, CNPI Tx will use HONI's CDPPS and associated triggers where applicable to measure the aggregate outage performance of both systems with respect to CNPI Tx's two CDP. Table 2 shown below details CNPI Tx's delivery point performance targets based on the demand associated with the delivery point.

(1) These values are based on HONI thresholds outlined in HONI CDPPS, RP-1999-0057/EB-2002-0424 (as revised on Feb 7, 2008). The inclusion of CNPI Tx's performance into HONI's much larger system average performance has a negligible impact on the resulting targets.

(2) These triggering values ensure that the customer served by CNPI Tx's two CDP are not exposed to aggregate reliability performance inclusive of all outages (including those caused by HONI) worse than any other CDP in southern Ontario before triggering an evaluation of that CDP.

Table 2: Gross Delivery Point Performance Targets based on Load Size

Performance Measure	**Delivery Point Performance Target (All Outages)** (Based on a Delivery Point's Total Average Station Load)			
	0 to 15MW		>15 to 40 MW	
	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance
DP Frequency of Interruptions (Outages/year)	4.1	9	1.1	3.5
DP Interruption Duration (minutes/year)	89	360	22	140

There are no Customer Delivery Points on CNPI Tx's transmission system with an average load that exceeds 40MW.

As with the HONI CDPPS, these statistics includes all momentary and sustained interruptions caused by forced outages and excludes outages resulting from extraordinary events that have had "excessive" impact on the transmission system (e.g. the 1998 ice storm and the August 2003 Blackout).

Given that CNPI Tx's transmission system is an extension to HONI's transmission system, CNPI Tx's actual delivery point statistics will be calculated inclusive of outages directly attributable to HONI. CNPI Tx will focus on outages attributable to CNPI Tx and will coordinate with HONI to address concerns which may arise from outages attributable to HONI.

4 Performance Standards to Identify "Outliers"

On a regular basis, the Minimum Standard of Performance from both subsections of Section 3 of this document will be used to identify if either of the two Customer Delivery Points should be classified as an "Outlier' due to performance exceeding a minimum threshold.

If either or both of the Customer Delivery Points is deemed to be an "Outlier", CNPI Tx will initiate suitable technical and financial evaluations to address performance, identify the root cause or causes, and determine the prudent course of action to achieve the minimum standard of performance.

Since certain interruptions that impact the CNPI Tx transmission system are expected to originate from the HONI transmission system, CNPI Tx will work with HONI to identify and implement a suitable solution.

5 Performance Standards to Identify "Inliers"

CNPI Tx, as part of its internal Asset Management Program, monitors the performance of its transmission system on a regular basis.

Available historical performance levels will indicate whether or not either of the two Customer Delivery Points is experiencing deteriorating trends in performance notwithstanding the fact that they are satisfactory performers as outlined in section 3.

Specifically, a performance baseline trigger for the frequency and duration of forced (momentary and sustained) interruptions is to be set at each delivery point, based on that delivery point's fixed 5-year 2009 to 2013 average performance, plus one standard deviation (1σ). The performance baseline triggers are to include forced outages resulting from force majéure events, but exclude events which have excessive impact on the transmission system that in CNPI Tx's assessment, strongly skew the historical trend of the measure e.g. tornadoes, earthquakes, and any other significant event having "excessive" impact on performance that is beyond the reasonable control of, and not a result of the fault or negligence of CNPI Tx or HONI.

If either or both of the Customer Delivery Points is deemed to be an "Inlier", CNPI Tx will initiate suitable technical and financial evaluations to address performance, identify the root cause or causes, and determine the prudent course of action to achieve the minimum standard of performance.

If it is determined that such deteriorating trends in performance is partially or fully attributable to HONI's upstream transmission system, CNPI Tx will work with HONI to identify and implement a prudent solution.

6 Remedial Costs to Address Performance "Outliers" and "Inliers"

As specified by the Transmission System Code, CNPI Tx shall not attribute any costs associated with network investments to any customer.

CNPI Tx will cover any remedial costs for initial and financial evaluations.

In addition, CNPI Tx will cover the remedial costs, including appropriate asset maintenance costs which include on-going maintenance and asset replacement to restore/sustain the inherent reliability performance of the existing assets to what was designed originally.

These expenditures are made on an ongoing basis consistent with good utility practices. No customer financial/capital contribution is required for these normal maintenance and sustainment expenditures.