## FIVE NATIONS ENERGY INC.

Customer Delivery Point Performance Standards (CDPP Standards)

**Revised August 2008** 

#### 1. Introduction

Five Nations Energy Inc. ("FNEI") has prepared these CDPP Standards pursuant to section 4.5.2 of the Transmission System Code ("TSC"), and in accordance with the Decision and Order of the Ontario Energy Board (the "Board") in EB-2007-0906 dated July 21, 2008. In preparing these CDPP Standards, FNEI has reviewed the Board's Decision and Order in RP-1999-0057/EB-2002-0424 dated July 25, 2005 respecting Hydro One's CDPP Standards, and the final CDPP Standards filed by Great Lakes Power Limited.

Because FNEI only started collecting performance data at the customer delivery point ("DP") level on January 1, 2004, a meaningful analysis of FNEI's data is not yet entirely possible. Consequently, FNEI is adopting the CDPP Standards of Hydro One Networks Inc. ("Hydro One"). Although FNEI is adopting Hydro One's CDPP Standards, FNEI wishes to draw the following facts to the Board's attention:

- FNEI's system is very small, with only four (4) DPs. As a result, any type of statistical averaging or trending of data with respect to performance standards will be a bit impractical.
- FNEI's system at present contains no assets that fall within the network pool.
- Significant reliability improvements are currently being made to the FNEI transmission system (e.g., twinning of the southern half of the system, installation of three back-up transformers serving three of its load customers, improved communications, etc.), and scheduled for completion in 2007 to 2009.
- Because FNEI is a linear line extending north from the former terminus of the
  Hydro One system, reliability concerns at the DPs of FNEI's transmission
  customers is also heavily dependant on Hydro One's reliability. FNEI's system is
  a continuation of the grid system operated by Hydro One, and as such FNEI's
  reliability can never be better than that achieved by Hydro One.

Performance Outliers: FNEI will use its limited existing data, and any future data obtained via the evaluation process outlined in section 5 of these CDPP Standards, in order to identify any performance "outliers". When FNEI has collected five years of data in 2009, FNEI will undertake a review of the data to determine if adoption of Hydro One's CDPP Standards continues to be appropriate. If FNEI believes at that point in time that any changes are required to its CDPP Standards, FNEI will seek Board approval of same.

Performance Inliers: Pursuant to the Board's Decision and Order in EB-2007-0906 (dated July 21, 2008), FNEI will establish "inlier" triggers for frequency and duration of forced outages once it has five years of DP data, which for most customers will be the end of 2008. The triggers will be the historical performance over the five year period plus one standard deviation. DPs with performance worse than the triggers for two

consecutive years would be "inliers" and would be candidates for more detailed review as to root of cause and possible remedial action.

## 2. Performance Standards Based on Size of Load Being Served

The Hydro One CDPP Standards and Triggers (which FNEI is proposing to adopt) are based on the size of load being served, and are provided in Table 1 below. As noted in the Board Decision and Order in RP-1999-0057, these Hydro One DP performance standards are based on historical (1991 to 2000) performance, as measured by the frequency and duration of outages of all momentary and sustained interruptions caused by forced outages, excluding outages resulting from extraordinary events that have had "excessive" impact on the transmission system (e.g., 1998 ice storm, 2003 blackout, etc.).

Table 1: DP Performance Standards Based on Load Size

Performance Measures	DP Performance Standards (Based on a Delivery Point's Total Average Station Load)							
	0 to 15MW		>15 to 40MW		>40 to 80MW		>80MW	
	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance
DP Frequency of Interruptions (Outages/yr)	4.1	9.0	1,1	3.5	0.5	1.5	0.3	1.0
DP Interruption Duration (min/yr)	89	360	22	140	11	55	5	25

Given that FNEI is a linear extension of the Hydro One system, FNEI's actual DP statistics will be calculated exclusive of outages directly attributed to Hydro One. The actual outages experienced by FNEI's DP customers may be greater than those listed in Table 1 below (because FNEI's DP customers are affected not only by outages on FNEI, but also outages on Hydro One's system). However, FNEI's use of Table 1 will focus solely on outages, etc. attributable to FNEI.

## 3. Performance Standards to Identify Performance "Outliers"

The Hydro One Minimum Standards of Performance will serve as the Triggers for FNEI to initiate technical and financial evaluations with its customers. As noted above, when FNEI has five years of data, FNEI will review its decision to adopt the Hydro One standards, and determine whether alternative standards will be submitted to the Board for

<sup>&</sup>lt;sup>1</sup> Momentary interruption is any forced interruption to a DP lasting less than 1 minute and a sustained interruption is any interruption to a DP lasting 1 minute or longer. A DP is interrupted whenever its requisite supply is interrupted as a result of a forced outage causing load loss.

approval. Until that time, the Hydro One Minimum Standard of Performance will apply to all existing FNEI transmission load customers. For new or expanding customer loads, the DP performance requirements will be specified and paid for by the customer based on their connection needs and negotiated as part of the Connection Cost Recovery Agreement ("CCRA").

When the three year rolling average of DP performance falls below the Minimum Standard of Performance or if requested to by a DP customer, FNEI will initiate technical and financial evaluations to determine the root cause of the reliability issue, and determine if any remedial action is required.

## 4. Performance Standards to Identify Performance "Inliers"

The performance standard to maintain the historical reliability performance levels at each customer DP will identify customer delivery points with deteriorating trends in reliability performance (i.e. performance "inliers") 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 DP, based on that DP's fixed five year 2004 to 2008 average performance, plus one standard deviation ( $1\sigma$ ). The performance baseline triggers are to include forced outages resulting from force majeure events, but exclude events which have excessive impact on the transmission system that in FNEI's assessment, strongly skew the historical trend of the measure e.g. tornadoes, earthquakes, other acts of God 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 FNEI.

Until FNEI has five years of data, FNEI will treat existing customers and new/modified customers by excluding them from identification as an "inlier" until a minimum of 5 years of data is available to establish the baseline triggers. The baseline triggers for these delivery points will be updated annually thereafter, for each additional year of performance data. DP performance that is worse than either baseline trigger (frequency or duration) in two consecutive years will be a candidate for remedial action. FNEI will respond by initiating technical and financial evaluations with affected customers to determine the root cause of the unreliability and remedial measures required to restore the historical reliability of DP performance.

FNEI will meet annually with each existing customer to review DP performance, and to initiate remedial action if required, when the root cause is within FNEI's control.

### 5. Remedial Costs to Address Performance "Outliers" and "Inliers"

FNEI does not charge customers for the cost of the initial technical and financial evaluation. The cost to prepare the final estimate is the only portion of the technical and financial evaluation that is included as part of the cost of the remedial work.

FNEI will cover the remedial costs of restoring and sustaining 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", irrespective of actual DP performance or of whether a DP is a performance "outlier" or "inlier". No customer financial/capital contribution is required for these normal maintenance expenditures.

To encourage proceeding with only those reliability performance improvements that are technically and economically practical and to limit the subsidization of reliability improvement costs by other pool customers, FNEI's level of incremental investment for improving the performance of an "outlier" or "inlier", beyond what was the original design, will be limited to the present value of three years worth of transformation and/or transmission line connection revenue associated with that DP. Any funding shortfalls for improving DP reliability performance, beyond what was the original design, will be made up by affected DP customers in the form of a financial/capital contribution (calculated in accordance with the TSC). Affected DP customers will be responsible for all the costs associated with any work required on facilities (lines and stations) that they own. The financial/capital contribution requirement is to be detailed in a CCRA to be signed with the affected customers, before any work to improve "outlier" or "inlier" performance begins.

Where specific FNEI transmission facilities are serving two or more customers in common with performance "outlier" or "inlier" performance, FNEI will approach all affected customers to determine their willingness to contribute jointly.

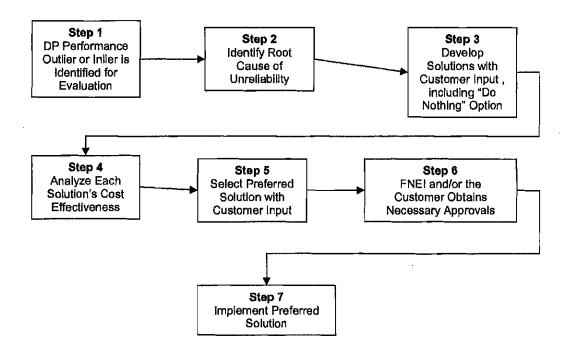
Where a customer contribution is required to improve or expand the transmission system to correct performance "outlier" or "inlier" performance, the customer will be given the right to undertake contestable work consistent with those applicable to new customer connections in the TSC.

When FNEI completes work to restore DP performance to the applicable standard, it will continue to monitor the DP for a year after the work is completed. If future performance suggests that the applicable standard has still not been met, then FNEI will review the work that has taken place and will identify corrective action, possibly with the financial participation of the customer. FNEI will not as a practice wait another three years and start a new technical and financial evaluation. FNEI will review and identify customer DP performance annually, regardless of the investment history.

# 6. <u>Implementation Process to Address Performance "Outliers" and "Inliers"</u>

The CDPP Standards sets out Triggers for FNEI to initiate technical and financial evaluations with affected customers. Each year, FNEI reviews reliability performance with its customers based on forced outage statistics which are compiled in January of each year (once the previous year's data has been reviewed). For customer DPs that are

identified as performance "outliers" or "inliers", FNEI will negotiate timing, solution, cost sharing arrangements, and any other related matters with each customer wanting to proceed with the DP reliability performance improvements based on the process outlined below.



Step 1 - DP Performance Outlier or Inlier is Identified for Evaluation

FNEI will compile the DP data for each year (by the end of following January), including identifying any "outliers" or "inliers" that may require a technical and financial evaluation. FNEI will inform each such customer of the results (where the customer's DP results shows them to be an outlier and/or inlier) and determine with the customer if FNEI should proceed with a technical and financial evaluation. The timing of starting the process for each customer will be discussed with the customer and will be based on prioritizing the outliers and inliers.

## Step 2 - Identify Root Cause of Unreliability

(Timeline: 1 to 2 months)

FNEI will analyze the data to determine if there is a root cause for the unreliability or whether there are several factors.

## Step 3 – Develop Solutions with Customer Input which includes a "Do Nothing" Option (Timeline: 1 month)

The data from Step 2 will be discussed with the customer and possible options (including a "do nothing" option) will be developed to improve the reliability of the DP.

#### Step 4 - Analyze Each Solution's Cost Effectiveness

(Timeline: 1 month)

Estimated costs of implementing each option are prepared and a cost/benefit analysis is undertaken to determine the most cost effective solution. Any cost sharing with the customer is identified for each option.

#### **Step 5 - Select Preferred Solution with Customer Input**

(Timeline: 1 to 2 months)

Based on the results of Step 4, the selection of the preferred solution will be discussed with the customer. With respect to any cost sharing, the customer will have to agree to pay its share if FNEI proceeds to implement that option as the selected option.

### Step 6 - FNEI and/or the Customer Obtain Necessary Approvals

(Timeline: 2 months)

FNEI will then obtain internal approval to proceed with the preferred solution. Where the customer must make a contribution, the customer will obtain internal approval.

#### Step 7 - Implement Preferred Solution

(Timeline: To be Determined)

The timing/schedule for the preferred solution will consider customer impacts, nature of remedial measures, equipment deliveries, FNEI resource capabilities, other investment priorities, and outage/resource availability. Where a customer has the obligation to pay a contribution, the customer and FNEI will execute a CCRA prior to work commencement.

**Note:** Timelines are based on dealing with one customer regarding one outlier or inlier. If more than one customer is involved in dealing with a DP performance issue then the timelines will likely be longer because of the increased complexity of dealing with more than one customer.