



Equipment Compliance Process

Hydro One Networks Inc.
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EQUIPMENT COMPLIANCE PROCESS

Introduction

Section 4.6 (Compliance of Facilities with Standards) of the Transmission System Code (the Code) addresses the issue of equipment compliance with the standards set out in the Code. The purpose of deeming certain equipment to be compliant is to avoid investment in equipment upgrades that are not needed to maintain the reliability of a transmitter's transmission system. Hydro One Networks Inc. (Networks) has considered this purpose as a general principle in developing the equipment compliance process described in this document and proposed to the Ontario Energy Board (Board).

In summary, the Code requires that:

1. all equipment placed into operation, procured or ordered before the Code comes into force be "deemed compliant" with the performance standards and technical requirements contained in the Code, including appendix 2.
2. the transmitter develop rules and procedures for requiring deemed compliant equipment to be brought into actual compliance with the Code within a specified time period, if there are material impacts on transmission system reliability and/or customer power quality, and/or if there is a material increase in capacity or load at the site where the deemed compliant equipment is located.
3. prior to implementation, the transmitter must file its rules and procedures with the Board for its review.

Networks has developed the process contained herein to meet the requirements of the Code as set out in section 4.6¹. The process takes account of the Board finding that in

¹ It should be noted that this process does not prevent Networks from disconnecting a customer's facilities at any connection point at any time throughout the term of the Connection Agreement between Networks and the customer, in any of the circumstances identified in section 20.3 of Appendix 1 of the Code.

instances where there has been a material increase in capacity or load, equipment must be brought into compliance only if there is a material deterioration in reliability or a material adverse effect on power quality.

In accordance with the Board's July 14, 2000 letter to Networks regarding the release of the Code, Networks consulted with its transmission customers and other interested stakeholders in the development of this proposed equipment compliance process. This process has been amended to reflect the Board's Order of July 25, 2005 and its Order of April 6, 2006.

PROCESS OVERVIEW

The process is made up of the following three phases: Problem identification, self-assessment and compliance plan development, and compliance plan implementation.

Note that either party shall have access to the dispute resolution process at any point in the process described below. In the case of Phase One of the process, either party may move directly to dispute resolution without the need to first use the third party facilitation process described below. The cost responsibility section which follows below applies to the entire process.

Cost Responsibility:

The costs of bringing equipment into actual compliance shall be borne by the customer whose equipment is causing the problem. An economic evaluation should be part of the evaluation of the need for replacement or upgrade of non-compliant equipment in order to assess the benefit or cost to the participant. However, where more than one customer is causing the problem, an economic evaluation will be carried out by the customers to assess the benefit or cost to each of a given solution and the costs divided accordingly between the customers involved. A third party or arbitrator resolving a dispute in phase one of the process is authorized to conduct or consider an economic evaluation and to recommend a remedial approach that takes the economic evaluation into account.

In some situations, a material non-compliance can arise as a result of interaction between the characteristics of the customer's equipment and the characteristics of the transmission system. These situations require a case by case consideration of whether the solution lies in making changes to the Customer's equipment, the transmission system or both and the appropriate allocation of costs. In these situations the Transmitter and the customers must co-operate to determine the most economic manner to address the problem, with an appropriate sharing of costs. Where it is established that the cause of the problem is attributable to the interaction between the

transmission system and the customer equipment, the transmitter must participate in the development of the compliance plan and share the financial consequences if the adopted solution is not effective.

1. **Problem Identification:** In this phase, a problem is identified by any party (e.g. customers, IESO, Networks), and brought to Networks' attention. Networks conducts an assessment of the problem to determine if there is a material impact on transmission system reliability or customer power quality, or a material increase in capacity or load at a customer's site. If a material impact is identified, Networks contacts the customer whose equipment is thought to be the source of the problem and provides the results of its findings². Potential outcomes of this phase are as follows:

- (a) Networks and the customer agree that the customer's equipment is creating a material impact. Networks and the customer proceed to phase 2 of the process.
- (b) Networks and the customer agree that the customer's equipment is not creating a material impact, and the process ends.
- (c) Networks and the customer disagree that the customer's equipment is creating a material impact. To resolve the disagreement, a 3rd party is jointly agreed to by Networks and the customer³. The 3rd party is authorized to carry out an economic assessment and to recommend a remedial approach that takes the economic evaluation into account. The resolution determines whether or not Networks and the customer proceed to phase 2.

Once Networks is made aware of the potential problem, Phase 1 can be completed in about one to three months, given outcomes (a) or (b) above. If Networks and the

² It should be noted that Networks is responsible to follow the Equipment Compliance process and take the same accountabilities as the customer if a problem is identified with Networks equipment by the customer, IESO or Networks themselves. For simplicity, the process description contained herein is based on a situation where another customer's transmission equipment is being assessed.

customer require the assistance of a 3rd party to determine impact materiality (outcome (c) above), then Phase 1 can take up to about six months to complete. If Networks and the customer continue to disagree on impact materiality after consideration of a 3rd party's recommendations, then the duration of this phase can be substantially longer. In this case, Networks and the customer would enter the dispute resolution process as per the Code. The decision coming out of the dispute resolution process determines whether or not Networks and the customer move on to phase 2.

2. **Self-Assessment and Compliance Plan Development:** In this phase, the customer conducts a self-assessment to identify the specific equipment associated with the material impact. Based on the self-assessment, the customer develops a compliance plan for implementation over a specific time period to bring its deemed compliant equipment into actual compliance with the Code.

Phase 2 should be completed in a maximum of 90 days. The timeline may be extended based on the complexity of the situation but is contingent on the consent of all parties involved.

3. **Compliance Plan Implementation:** In this phase, the customer implements the compliance plan in accordance with the schedule, which is monitored by Networks as required. Upon implementation, the customer provides written confirmation to Networks that the plan has been fully implemented. Networks documents the results of the plan and notifies the appropriate parties. If the plan does not solve the problem, then the customer is requested to create another compliance plan or reassess the problem. The process continues until the issue is resolved.

The duration of Phase 3 is dependent on the specific customer compliance plan developed in each case.

³ Note that either party shall have access to the dispute resolution process at any point in the process described below.

PROCESS DETAILS

Phase 1: Problem Identification (boxes 1-25)

Boxes 1-4: A potential problem is identified by either a customer, the Independent Market Operator (IESO) or Networks, related to impacts on transmission system reliability, customer power quality, or an increase in load or capacity at a customer's site, if that increase is causing a material decrease in reliability or a material adverse effect on power quality. Information about the potential problem can be brought to Networks' attention through a Hydro One Account Executive. Once the information is received, it is forwarded to the appropriate staff within Networks.

Boxes 5-7: Networks assesses the materiality associated with the impact on transmission system reliability, customer power quality and/or load or capacity increases where they are negatively impacting reliability or power quality.

Subsequent to a complaint or inquiry, the tests for impact materiality are as follows:

- If the impact violates any technical requirements contained in the Code including the performance standards found in Appendix 2 of the Code, then the customer's deemed compliant equipment must be upgraded or modified to comply with the Code.
- If an increase in capacity or load at a customer's site requires upgrades or modifications to its deemed compliant equipment, then this equipment along with all associated ancillary electrical equipment must be upgraded or modified to comply with the Code. This requirement will apply only in instances where there is a material deterioration in reliability or a material adverse effect on power quality.

These materiality tests are applied as appropriate on a case by case basis, keeping in mind that the purpose of deeming certain equipment to be compliant is to avoid investment in equipment upgrades that are not needed to maintain the reliability of a transmitter's

transmission system. Networks documents its assessment of impact materiality in a brief report.

Boxes 8-9: If the assessment indicates that the impact is not material, then the identifier is notified by a Networks Account Executive or other Networks staff as appropriate. The issue is closed. If the identifier is a customer, then this customer may need to further assess its own equipment. If requested by the customer, a Networks Account Executive may assist the customer in these activities. However, these activities are outside of this process.

Boxes 10, 13-17: If the assessment indicates that the impact is material, then a Networks Account Executive contacts the customer upon whose site the source of the problem (i.e. the deemed compliant equipment) is located. The customer is notified that its deemed compliant equipment is causing a material impact. If the customer agrees, the parties move on to phase 2 of the process. If the customer disagrees, then a 3rd party is jointly agreed to by the customer and Networks to assess the customer's deemed compliant equipment for impact materiality⁴. The scope of work and timeline for the 3rd party study are jointly agreed to by Networks and the customer. Networks and the customer also agree that if the 3rd party's assessment indicates that the customer's equipment is creating a material impact, then the customer pays for the 3rd party assessment. Networks pays for the assessment if it indicates that the customer's equipment is not creating a material impact.

Boxes 11-12: The IESO and the OEB are notified of the situation. This activity occurs in parallel with box 10.

Boxes 18-20: If the 3rd party assessment indicates a material impact, a Networks Account Executive notifies the customer. If the customer agrees, then Networks and the customer move on to phase 2. If the customer disagrees with this conclusion, then Networks and

⁴ Note however that the Parties may choose to proceed directly to the dispute resolution process at this time.

the customer enter the dispute resolution process as per the Code. The decision coming out of the dispute resolution process determines whether or not Networks and the customer move on to phase 2.

Boxes 21-25: If the 3rd party assessment indicates no material impact, Networks determines whether or not it agrees with this finding. If Networks agrees, then a Networks Account Executive or other Networks staff as appropriate reports this conclusion to the identifier. Networks also informs the IESO and the OEB as appropriate, and the issue is closed. If the identifier is a customer, a Networks Account Executive may assist the customer in further assessing its own equipment. However, these activities are outside of this process. If Networks disagrees with the 3rd party findings, then Networks and the customer enter the dispute resolution process as per the Code. The decision coming out of the dispute resolution process determines whether or not Networks and the customer move on to phase 2.

Expected Duration of Phase 1: Once Networks is made aware of the potential problem, Phase 1 can be completed in about one to three months if there is agreement on impact materiality. If Networks and the customer require the assistance of a 3rd party to determine impact materiality, then Phase 1 can take up to about six months to complete. If Networks and the customer continue to disagree on impact materiality after consideration of a 3rd party's recommendations, then the duration of this phase can be substantially longer. In this case, Networks and the customer would enter the dispute resolution process as per the Code. The decision coming out of the dispute resolution process determines whether or not Networks and the customer move on to phase 2.

Phase 2: Self-Assessment and Compliance Plan Development (boxes 26-34)

Boxes 26-28: If the specific customer equipment that is creating the material impact has not yet been identified, then the customer conducts a self-assessment to identify the specific equipment. The customer then develops a compliance plan that sets out the

recommended actions to address the problem with a solution. The solution plan may include but is not limited to equipment upgrades, operation and maintenance changes and adjustments to operating procedures. The compliance plan will include the results of the customer self-assessment, and must have an appropriate level of technical detail as well as a schedule for compliance.

Boxes 29-34: The customer submits the compliance plan and schedule to Networks. Networks reviews the schedule. If the schedule is acceptable to Networks (who may consult with the identifier who may be materially impacted by the customer's equipment), then a Networks Account Executive notifies the customer, and the process continues to phase 3. If the schedule is not acceptable to Networks, then a Networks Account Executive notifies the customer and provides guidance regarding improvements to the schedule. Once the schedule is acceptable to Networks, the process continues to phase 3.

Expected Duration of Phase 2: Phase 2 should be completed in a maximum of 90 days. The timeline may be extended based on the complexity of the situation but is contingent on the consent of all parties involved.

Phase 3: Compliance Plan Implementation (boxes 35-46)

Boxes 35-37: The customer implements the compliance plan in accordance with the schedule. Networks monitors the progress of the plan as required. The customer provides written notification to Networks that compliance plan implementation is completed.

Boxes 38-46: Once Networks has been informed by the customer that the compliance plan has been implemented, Networks assesses the results to determine if the plan has solved the problem (i.e. eliminated the material impact). If the problem is solved, a Networks Account Executive notifies the customer and the identifier. Networks also

notifies the IESO and the OEB, as appropriate. The findings are documented in a file memo prepared by Networks and the issue is closed. If the problem is not solved, a Networks Account Executive notifies the customer and requests the customer to prepare a new compliance plan. If the customer agrees with Networks, the parties return to the beginning of phase 3. If the customer does not agree with Networks, the parties enter the dispute resolution process as per the Code.

Where more than one customer is causing the problem, an economic evaluation will be carried out by the customers to assess the benefit or cost to each of a given solution and the costs divided accordingly between the customers involved.