

## Specific provisions applicable in Québec for standard

**PRC-024-43 – Frequency and Voltage Protection Settings for Synchronous Generators, Type 1 and Type 2 Wind Resources, and Synchronous CondensersGenerating Resources**

This appendix establishes specific provisions for the application of the standard in Québec. Provisions of the standard and of this appendix must be read jointly for comprehension and interpretation purposes. Where the standard and appendix differ, the appendix shall prevail.

**A. Introduction**

- 1. Title:** No specific provisions.
- 2. Number:** No specific provisions.
- 3. Purpose:** No specific provisions.
- 4. Applicability:** In the application of this standard, all reference to the term “Bulk Electric System” or “BES” shall be replaced by the terms “Main Transmission System” or “RTP” respectively.

**4.1. Functional Entities**

No specific provisions.

**4.2. Facilities**

No specific provisions.

The Facilities subject to this standard are the Facilities of the Main Transmission System (RTP).

Replace all references to Bulk Electric System (BES) with Main Transmission System (RTP).

**5. Effective date:**

- 5.1.** Adoption of the standard by the Régie de l'énergie: Month XX, 202X  
~~December 21, 2021~~
- 5.2.** Adoption of the standard by the Régie de l'énergie: Month XX, 202X  
~~December 21, 2021~~
- 5.3.** Effective date of the standard and of this appendix in Quebec: Month XX, 202X  
~~July 1, 2025~~

For Facilities already subject to PRC-024-1, the requirements will be implemented on the following dates:

<b>Requirements</b>	<b>Applicability</b>	<b>Implementation dates in Québec</b>
<b>R1 to R4</b>	<u>At least 40% of its applicable Facilities</u>	<u>October 1, 2018</u>
	<u>At least 60% of its applicable Facilities</u>	<u>October 1, 2019</u>
	<u>At least 80% of its applicable Facilities</u>	<u>October 1, 2020</u>
	<u>100% of its applicable Facilities</u>	<u>October 1, 2021</u>

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~~For Facilities already subject to PRC-024-2, the requirements will be implemented on the following dates:~~

<del>Requirements</del>	<del>Applicability</del>	<del>Implementation dates in Québec</del>
<del>R1 to R4</del>	<del>At least 40% of its applicable Facilities</del>	<del>July 1, 2022</del>
	<del>At least 60% of its applicable Facilities</del>	<del>July 1, 2023</del>
	<del>At least 80% of its applicable Facilities</del>	<del>July 1, 2024</del>
	<del>100% of its applicable Facilities</del>	<del>July 1, 2025</del>

For Facilities subject to PRC-024-3, the requirements will be implemented on the following dates:

Requirements	Applicability	Implementation dates in Québec
All requirements (R1 to R4, D.A.5) except requirement D.A.2	100% of its applicable Facilities	July 1, 2025
D.A.2	At least 50% of its applicable Facilities	July 1, 2025
	At least 70% of its applicable Facilities	July 1, 2027
	100% of its applicable Facilities	July 1, 2030

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For Facilities subject to PRC-024-4, the requirements will be implemented on the following dates:

<u>Requirements</u>	<u>Applicability</u>	<u>Implementation dates in Québec</u>
<u>Synchronous Condensers</u>		
<u>All requirements (R1 to R4, D.A.5) except requirement D.A.2</u>	<u>100% of its applicable Facilities</u>	<u>The first day of the first calendar quarter occurring 12 calendar months following the implementation of the PRC-024-4 standard by the Régie.</u>
<u>D.A.2</u>	<u>100% of its applicable Facilities</u>	<u>The first day of the first calendar quarter occurring 36 calendar months following the implementation of the PRC-024-4 standard by the Régie.</u>
<u>Synchronous Generators and Type1 and Type 2 Wind Resources</u>		
<u>All requirements (R1 to R4, D.A.5) except requirement D.A.2</u>	<u>100% of its applicable Facilities</u>	<u>The first day of the first calendar quarter occurring 12 calendar months following the implementation of the PRC-024-4 standard by the Régie.</u>
<u>D.A.2</u>	<u>At least 50% of its applicable Facilities</u>	<u>The first day of the first calendar quarter occurring 12 calendar months following the implementation of the PRC-024-4 standard by the Régie.</u>
	<u>At least 70% of its applicable Facilities</u>	<u>The first day of the first calendar quarter occurring 36 calendar months following the implementation of the PRC-024-4 standard by the Régie.</u>
	<u>100% of its applicable Facilities</u>	<u>The first day of the first calendar quarter occurring 60 calendar months following the implementation of the PRC-024-4 standard by the Régie.</u>

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**B. Requirements and Measures**

Specific provision regarding Requirement R1: ~~Inverter-based resources,~~ Thermal generating stations, as well as generating stations equipped with asynchronous generators, shall adhere to the curves in Appendix 1, as specified by Requirement R1, except that they may be tripped at a frequency of  $\geq 61.7$  Hz.

**C. Compliance**

**1. Compliance Monitoring Process**

**1.1. Compliance Enforcement Authority**

In Québec, “Compliance Enforcement Authority” means the Régie de l’énergie in its roles of monitoring and enforcing compliance with respect to the Reliability Standard and to this appendix.

**1.2. Evidence Retention**

No specific provisions.

**1.3. Compliance Monitoring and Assessment Program**

The Régie de l’énergie establishes the monitoring processes used to evaluate data or information for the purpose of determining compliance or non-compliance with the Reliability Standard and with this appendix.

**Violation Severity Levels**

No specific provisions.

**D. Regional Variances**

~~No specific provisions. Replace all references to Bulk Electric System (BES) with Main Transmission System (RTP).~~

**Violation Severity Levels**

No specific provisions.

**E. Associated Documents**

No specific provisions.

**PRC-024 — Attachment 1**

No specific provisions.

**PRC-024-2 — Attachment 2**

No specific provisions.

**PRC-024 – Attachment 2A**

Specific provision regarding boundary details:

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It is acceptable to use a measurement of the Root Mean Square (RMS) value of the overvoltage or undervoltage (phase-to-phase or phase-to-ground) provided that the trip associated with these protections occurs only when this overvoltage or undervoltage is present simultaneously on the three phases.

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Version history

Version	Date	Action	Change tracking
1	<del>December 21, 2021</del> <u>Month XX, 202X</u>	New appendix as per decision <del>D-2021-168 D-2XXX-XXX-</del>	New