

## Standard PRC-006-3 — Automatic Underfrequency Load Shedding

### Appendix ~~QC-PRC-006-35-QC-1~~

#### Provisions Specific provisions specific applicable to Standard PRC-006-3 applicable in Québec PRC-006-5 — Automatic Underfrequency Load Shedding

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

#### A. Introduction

1. **Title:** ~~No specific provision~~ Automatic Underfrequency Load Shedding
2. **Number:** ~~No specific provision~~ PRC-006-3
3. **Purpose:** No specific provision
4. **Applicability:**

This standard only applies to the facilities of the Main Transmission System (RTP).

5. **Effective Date:**

- 5.1. Adoption of the standard by the Régie de l'énergie: ~~July 31, 2018~~ Month xx, 202x
- 5.2. Adoption of the appendix by the Régie de l'énergie: ~~July 31, 2018~~ Month xx, 202x
- 5.3. Effective date of the standard and its appendix in Québec: ~~October 1, 2018~~ Month xx, 202x

#### IMPLEMENTATION PLAN FOR PRC-006-~~3~~ 5 STANDARD

Requirement	Implementation date in Québec
R1 to R2, D.A.3, D.A.4.3, R5 to R15	<del>October 1, 2018</del> <u>Month xx, 202x</u>
D.A.4.1 and D.A.4.2	The first day of the first calendar quarter one year following the availability of protection system settings provided by the Generator Owners as per PRC-024- <del>1</del> <u>2</u> and its Québec appendix.

#### ~~6. — Background:~~

~~No specific provision~~

#### B. Requirements and Measures

No specific provision

#### 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

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and to this appendix. The Régie de l'énergie is responsible, in Québec, for compliance monitoring with respect to the reliability standard and its appendix that it adopts-

#### **1.2. Evidence Retention**

No specific provision

#### **1.3. Compliance Monitoring and Assessment Processes**

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. No specific provision

#### **1.4. Additional Compliance Information**

No specific provision

#### **2. Violation Severity Levels**

No specific provision

### **D. Regional Variances**

No specific provision

#### **D.A. Regional Variance for the Québec Interconnection**

No specific provision

#### **D.B. Regional Variance for the Western Electricity Coordinating Council**

### **E. Associated Documents**

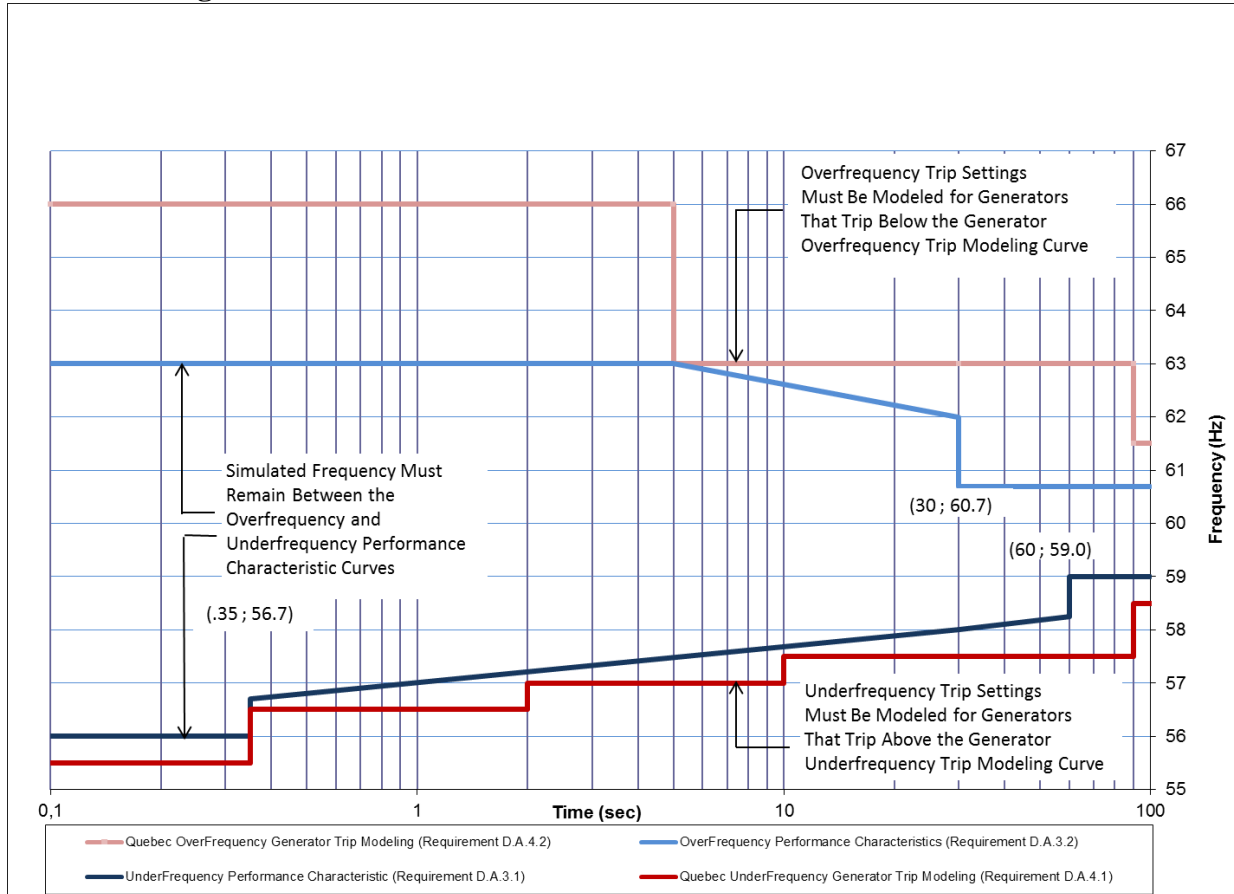
No specific provision

#### **PRC-006-~~35~~ – Attachment 1**

No specific provision

#### **PRC-006-~~35~~ – Attachment 1A (Québec)**

**PRC-006-35 Attachment 1A (Québec)**  
**UnderFrequency Load Shedding Program**  
**Design Performance and Modeling Curves for**  
**Regional Variances D.A.3.1-D.A.3.3 and D.A.4 Parts D.A.4.1-D.A.4.3**



Curve Definitions

Generator Overfrequency Trip Modeling			Overfrequency Performance Characteristic		
$t \leq 5 \text{ s}$	$t \leq 90 \text{ s}$	$t > 90 \text{ s}$	$t \leq 5 \text{ s}$	$5 \text{ s} < t \leq 30 \text{ s}$	$t > 30 \text{ s}$
$f = 66 \text{ Hz}$	$f = 63 \text{ Hz}$	$f = 61.5 \text{ Hz}$	$f = 63 \text{ Hz}$	$f = -1.29 \log(t) + 63.90 \text{ Hz}$	$f = 60.7 \text{ Hz}$

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**PRC-006-5 — Automatic Underfrequency Load Shedding**

Generator Underfrequency Trip Modeling					Underfrequency Performance Characteristic		
$t \leq 0.35 \text{ s}$	$t \leq 2 \text{ s}$	$t \leq 10 \text{ s}$	$t \leq 90 \text{ s}$	$t > 90 \text{ s}$	$t \leq 0.35 \text{ s}$	$0.35 \text{ s} < t \leq 60 \text{ s}$	$t > 60 \text{ s}$
$f = 55.5 \text{ Hz}$	$f = 56.5 \text{ Hz}$	$f = 57.0 \text{ Hz}$	$f = 57.5 \text{ Hz}$	$f = 58.5 \text{ Hz}$	$f = 56.0 \text{ Hz}$	$f = 0.72 \log(t) + 57.03 \text{ Hz}$	$f = 59 \text{ Hz}$

**Revision Version History history**

<b><u>Revision Version</u></b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
<u>0</u>	<u>July 31, 2018</u>	<u>New appendix</u>	<u>New</u>
<u>1</u>	<u>Month xx, 202x</u>	<u>New appendix as per decision D-xxxx- yyyy</u>	<u>New</u>