

NB Appendix
PRC-025-1-NB-0 - Generator Relay Loadability

This appendix establishes modifications to the FERC approved NERC standard PRC-025-1 for its specific application in New Brunswick. This appendix must be read with PRC-025-1 to determine a full understanding of the requirements of the standard for New Brunswick. Where the standard and appendix differ, the appendix shall prevail.

For the purpose of this standard the term “Bulk Electric System” and its acronym, “BES” shall mean the “bulk power system” as defined in the New Brunswick *Reliability Standards Regulation – Electricity Act*.

A. Introduction

1. Title: Generator Relay Loadability

2. Number: PRC-025-1

Purpose: No New Brunswick modifications

3. Applicability:

3.1. Functional Entities:

3.1.1 No New Brunswick modifications

3.1.2 No New Brunswick modifications

3.1.3 No New Brunswick modifications

3.2. Facilities: No New Brunswick modifications

3.2.1 No New Brunswick modifications

3.2.2 No New Brunswick modifications

3.2.3 No New Brunswick modifications

3.2.4 No New Brunswick modifications

3.2.5 No New Brunswick modifications

4. Background:

No New Brunswick modifications

5. Effective Date: No New Brunswick modifications

B. Requirements and Measures

R1. No New Brunswick modifications

M1. No New Brunswick modifications

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

New Brunswick Energy and Utilities Board

1.2. Evidence Retention

No New Brunswick modifications

1.3. Compliance Monitoring and Assessment Processes

No New Brunswick modifications

1.4. Additional Compliance Information

No New Brunswick modifications

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	No New Brunswick modifications					

D. Regional Variances

No New Brunswick modifications

E. Interpretations

No New Brunswick modifications

F. Associated Documents

No New Brunswick modifications

PRC-025-1 – Attachment 1: Relay Settings

Introduction

No New Brunswick modifications

Generators

No New Brunswick modifications

Transformers

No New Brunswick modifications

Multiple Lines

No New Brunswick modifications

Exclusions

No New Brunswick modifications

1. No New Brunswick modifications
2. No New Brunswick modifications
3. No New Brunswick modifications
4. No New Brunswick modifications
5. Protective relay elements used only for Special Protection Systems that are subject to one or more requirements in a NBEUB approved reliability standard.
6. No New Brunswick modifications
7. No New Brunswick modifications

Table 1

No New Brunswick modifications

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Table 1. Relay Loadability Evaluation Criteria					
Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria	
No New Brunswick modifications	No New Brunswick modifications	1a	No New Brunswick modifications	No New Brunswick modifications.	
		OR			
		1b	No New Brunswick modifications	No New Brunswick modifications	
		OR			
		1c	No New Brunswick modifications	No New Brunswick modifications	
	No New Brunswick modifications				

⁴ No New Brunswick Modifications

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Table 1. Relay Loadability Evaluation Criteria				
Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	2a	No New Brunswick modifications	No New Brunswick modifications
		OR		
		2b	No New Brunswick modifications	No New Brunswick modifications
		OR		
		2c	No New Brunswick modifications	No New Brunswick modifications
	The same application continues with a different relay type below			
	No New Brunswick modifications	3	No New Brunswick modifications	No New Brunswick modifications
No New Brunswick modifications				

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	4	No New Brunswick modifications	No New Brunswick modifications
	OR			
	No New Brunswick modifications	5	No New Brunswick modifications	No New Brunswick modifications
	OR			
	No New Brunswick modifications	6	No New Brunswick modifications	No New Brunswick modifications
No New Brunswick modifications				

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	7a	No New Brunswick modifications	No New Brunswick modifications
		OR		
		7b	No New Brunswick modifications	No New Brunswick modifications
		OR		
		7c	No New Brunswick modifications	No New Brunswick modifications
	No New Brunswick modifications			

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	8a	No New Brunswick modifications	No New Brunswick modifications
		OR		
		8b	No New Brunswick modifications	No New Brunswick modifications
		OR		
		8c	No New Brunswick modifications	No New Brunswick modifications
	No New Brunswick modifications			

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	9a	No New Brunswick modifications	No New Brunswick modifications
		OR		
		9b	No New Brunswick modifications	No New Brunswick modifications
		OR		
		9c	No New Brunswick modifications	No New Brunswick modifications
No New Brunswick modifications				

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Table 1. Relay Loadability Evaluation Criteria				
Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	10	No New Brunswick modifications	No New Brunswick modifications
	No New Brunswick modifications	11	No New Brunswick modifications	No New Brunswick modifications
	No New Brunswick modifications			

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	12	No New Brunswick modifications	No New Brunswick modifications
No New Brunswick modifications				
No New Brunswick modifications	No New Brunswick modifications	13a	No New Brunswick modifications	No New Brunswick modifications
		OR		
		13b	No New Brunswick modifications	No New Brunswick modifications
No New Brunswick modifications				

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	14a	No New Brunswick modifications	No New Brunswick modifications
		OR		
		14b	No New Brunswick modifications	No New Brunswick modifications
	No New Brunswick modifications			

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Table 1. Relay Loadability Evaluation Criteria				
Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	15a	No New Brunswick modifications	No New Brunswick modifications
		OR		
		15b	No New Brunswick modifications	No New Brunswick modifications
	No New Brunswick modifications			

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	16a	No New Brunswick modifications	No New Brunswick modifications
		OR		
		16b	No New Brunswick modifications	No New Brunswick modifications
No New Brunswick modifications				

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	17	No New Brunswick modifications	No New Brunswick modifications
	No New Brunswick modifications			

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Table 1. Relay Loadability Evaluation Criteria				
Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	18	No New Brunswick modifications	No New Brunswick modifications
	No New Brunswick modifications			

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Application	Relay Type	Option	Bus Voltage ⁴	Pickup Setting Criteria
No New Brunswick modifications	No New Brunswick modifications	19	No New Brunswick modifications	No New Brunswick modifications
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Rationale:

No New Brunswick modifications

Rationale for R1:

No New Brunswick modifications

Version History (maintained by NBEUB)

Version	NBEUB Approval Date	NB Appendix Effective Date	Change Tracking	Comments
0	02/23/15	04/01/15	1. Bulk Electric System (BES) replaced with "bulk power system" throughout. 2. Revised Section C to clarify the NBEUB as the entity having the compliance enforcement authority for NB. 3. Revised Attachment 1 Section 5 to clarify that NBEUB approved reliability standards are the applicable standards in NB.	Approved under NBEUB Matter 273 Effective dates: See PRC-025-1 Implementation Plan