Commissioning Verification Form (Simplified Projects)

This Commissioning Verification Form (CVF) is required for Embedded Generators ≤100kW applying for connection with GrandBridge Energy Inc. This document must be signed by a Professional Engineer (P.Eng) registered in Ontario and or a licensed electrical contractor.

Project Information

Reference Number (if applicable)	
Project Address	
Project Name	
AC Rating [kW] (ex. Inverter Rating)	
DC Rating [kW] (ex. Solar Array Rating)	
Project proposed in-service date	
Connecting transformer station and feeder	
Number of electricity generating or storage device/inverters	

Commissioning Contact Information

Applicant name	
Title	
Mailing address	
Telephone	
Email	
Commissioning agent (P. Eng or licensed electrical contractor	

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Checklist prior to main commissioning and verification tasks:

The commissioning agent (P.Eng or licensed electrical contractor) is to carry out the following checks prior to conducting the main commissioning and verification task.

	Results (Yes/No)	**Initials**	**Comments**
Conductors are per the single-line diagram (SLD) (type, size and length)			
Fusing is installed as per SLD and protection scheme			
Nameplate values on the equipment are correct per SLD			
Single Line Diagram present on site			
Inverter(s) and DG disconnect switch nomenclature present and match site single line diagram			
Two Sources Warning sign present on site			

Commissioning Anti-Islanding Test:

a) Turn Off Utility-Side DG Disconnect:

Verification	**Yes/No**	**Initials**	**Date**	**Comments**
Did the DER facility indicate a loss of the utility grid?				
After a loss of the utility grid, is there voltage on the output of the DER facility?				
Did the DER facility shut down as required?				

b) Turn On Utility-Side DG Disconnect:

Verification	**Yes/No**	**Initials**	**Date**	**Comments**
Did the DER facility turn back on upon reconnection with the utility grid?				
Did the DER facility reconnect with the utility grid after 5 minutes?				
Did the DER facility return to its normal operating state?				

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Generator Protective Relay Settings:

Inverter type generators shall be compliant with CSA Standards, CSA 22.2 No. 107.1 “General use Power Supply” and CSA 22.3 No. 9-2020 “Interconnection of distributed energy resources and electricity supply systems” and bear a certification mark recognized by the Ontario Electrical Safety Code.

- In lieu of compliance with CSA 22.3 No. 9-2020 the inverter will be deemed acceptable if it achieves UL 1741 SA (2016 or later) certification

Table 1 – Inverter Based Generation Clearing Times

System Voltage Vn = V nominal **V (Volts)**	Frequency **F (Hertz)**	Maximum number of cycles to disconnect	
		Seconds	Cycles
V < 0.5 Vn	60	0.1	6
0.5 Vn <= **V** < 0.88 Vn	60	2	120
1.10 Vn <= **V** <1.37 Vn	60	2	120
V > 1.37 Vn	60	0.033	2
Vn	F < 59.5*	0.1	6
Vn	F > 60.5	0.1	6

* The UL1741 & IEEE P1547 Standards use F < rated-0.7 i.e. 59.3 Hz. To update if CSA C22.2 No.107.1-01 is changed.

By signing this form, the commissioning test representative and the owner of the project acknowledge that all required verifications specified under this commissioning verification form have been completed and inverter equipment meets the applicable protection requirements outlined in the Generator Protective Relay Settings section of this document.

Signature of Commissioning Test Representative (Must be the P.Eng or licensed electrical contractor)

Signature of project owner

Name (Print)

Name (Print)

Title

Date

Date

Return the completed document by email to: generation@grandbridgeenergy.com