



Commissioning Verification Form ($\leq 10\text{kW}$)

This commissioning verification form (CVF) is required for Micro Embedded Generators applying for connection with Alectra Utilities. This document must be signed by the contractor or project electrician and the owner of the project.

Site Information

Project Address	
Reference Number (IESO or Other if applicable)	<input type="checkbox"/>
AC Rating [kW] (ex. Inverter Rating)	<input type="checkbox"/>
DC Rating [kW] (ex. Solar Array Rating)	<input type="checkbox"/>

Commissioning Test Contact Information

Name	<input type="checkbox"/>
Title	<input type="checkbox"/>
Mailing address	<input type="checkbox"/>
Telephone	<input type="checkbox"/>
Email	<input type="checkbox"/>

Commissioning Anti-Islanding Test:

a) Turn Off Utility-Side DG Disconnect:

Verification	Yes/No	Initials	Date	Comments
Did the inverter indicate a loss of the utility grid?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After a loss of the utility grid, is there voltage on the output of the inverter?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did the inverter shut down as required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b) Turn On Utility-Side DG Disconnect:

Verification	Yes/No	Initials	Date	Comments
Did the inverter turn back on upon reconnection with the utility grid?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did the inverter return to its normal operating state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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Generator Protective Relay Settings

The inverter-based Micro Embedded Generator must confirm that the inverter equipment meets the IEEE 1547 over/under frequency and over/under voltage protection requirements indicated below.

a) Over Frequency/Under Frequency Protection:

Table 1 - Over/Under Frequency Protection Set Points and Clearing Times

Generator Size	Frequency Range (Hz)	Clearing Times(s)*
$\leq 30\text{ kW}$	> 60.5	0.16
	< 59.3	0.16
$> 30\text{ kW}$	> 60.5	0.16
	$< (59.8 - 57.0) -$ adjustable	Adjustable - 0.166 to 300
	< 57.0	0.16

*Generators $\leq 30\text{kW}$ - Maximum clearing time

Source: IEEE 1547

*Generators $> 30\text{kW}$ - Default clearing time

b) Over Voltage/Under Voltage Protection:

Table 2 - Over/Under Voltage Protection Setting and Clearing Time

Voltage Range (% of base voltage)	Clearing Time(s)*
$V < 50$	0.16
$50 \leq V < 88$	2.00
$110 < V < 120$	1.00
$V \geq 120$	0.16

* DG $\leq 30\text{ kW}$ - Maximum clearing time

Source: IEEE 1547

* DG $> 30\text{ kW}$ - Normal clearing time

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 IEEE 1547 protection requirements outlined in the Generator Protective Relay Settings section of this document.

Signature of Commissioning Test Representative
(Must be the project contractor or project electrician)

Signature of the owner of the project

Name (Print)

Name (Print)

Title

Date

Date

Return the completed document by email to
DER@alectrautilities.com