

G59/3 Commissioning test requirements for Accelerated Loss of Mains Change Programme

LoM – Relay Settings change only

Installation Details	
Site name	
Address	
Generation Type/Capacity	
G59 Relay - Manufacturer/Model Serial/Firmware number	
Contact person	
Telephone Number	
E-mail address	
Commissioning Engineer	
Name	
Company	
Telephone Number	
E-mail address	
Test set - Manufacturer/Model Calibration	

Loss-of-Mains (LOM) Protection Tests – RoCoF for Small Power Stations									
Calibration and Accuracy Tests									
Ramp in range 49.0-51.0Hz	Pickup (+ / -0.025Hzs ⁻¹)				Relay Operating Time RoCoF= +0.05 / 0.10Hzs ⁻¹ above setting				
Setting = 0.5 / 1.0 Hzs ⁻¹	Lower Limit	Measured Value	Upper Limit	Result	Test Condition	Lower Limit	Measured Value	Upper Limit	Result
Increasing Frequency	0.475 0.975		0.525 1.025	Pass/Fail	0.55 Hzs ⁻¹ 1.10 Hzs ⁻¹	>0.5s		<1.0s	Pass/Fail
Reducing Frequency	0.475 0.975		0.525 1.025	Pass/Fail	0.55 Hzs ⁻¹ 1.1 Hzs ⁻¹	>0.5s		<1.0s	Pass/Fail
Stability Tests									
Ramp in range 49.0-51.0Hz	Test Condition	Test frequency ramp		Test Duration	Confirm No Trip	Result			
Inside Normal band	< RoCoF (increasing f)	0.45Hzs ⁻¹		2.1s		Pass/Fail			
Inside Normal band	< RoCoF (reducing f)	0.95 Hzs ⁻¹		2.1s		Pass/Fail			
Additional Tests / Comments / Observations:									

LoM Protection - Stability test				
	Start Frequency	Change	End Frequency	Confirm no trip
Positive Vector Shift	49.5Hz	+50 degrees		
Negative Vector Shift	50.5Hz	- 50 degrees		

LoM Protection – Functional test			
Ramp in range 49.0-51.0Hz	Test condition	Confirm trip of associated plant	Result
Increasing Frequency	1.10 Hzs ⁻¹		Pass/Fail
Reducing Frequency	1.10 Hzs ⁻¹		Pass/Fail

Declaration – to be completed by Generator or Generators Appointed Technical Representative.	
I declare that the Generating Unit and the installation comply with the requirements of EREC G59/3 and the additional commissioning checks noted above have been successfully completed	
Signature:	Date:
Position.	
Declaration – to be completed by DNO Witnessing Representative*	
I confirm that I have witnessed the tests in this document on behalf of SSEN and that the results are an accurate record of the tests	
Signature:	Date:

*Where witnessed