COMPLIANCE REPORTING FORM-CLASS A1

Embedded Generation via Rotating Machine
>30kVA and ≤1,500 kVA

Certification

CX Ref #:
Ergon Energy WR#:

Date: / /

Embedded Generation via RM > 30 kVA and ≤ 1,500 kVA –Class A1
Project Name:
Location:

I certify that as a Registered Professional Engineer of Queensland and by virtue of my training and experience, that the submission documentation complies with the requirements of the latest revisions of the following:

- Ergon Energy Technical Study Report provided for the above stated project.
- STNW1175 - Standard for HV Embedded Generating Connections
- AS/NZS 3000 – Electrical Installations
- AS 2067 – Substations and high voltage installations exceeding 1kV A.C.
- AS 3100 – Approval and test specification – General requirements for electrical equipment
- AS 60034.1 Rotating electrical machines, Part 1: Rating and performance.
- AS 60034.22 Rotating electrical machines, Part 22: AC generators for reciprocating internal combustion (RIC) engine driven generating sets.
- QLD Electricity Connection and Metering Manuals

In addition to the above, the following attachments have been submitted as part of the application:

- Attachment 1 – Rotating Machine Specifications & Checklist
- Attachment 2 – Compliance Checklist
- Attachment 3 – Commissioning Test Results
- Attachment 4 – As Constructed SLD & Relay Settings

Signature:

	RPEQ Engineer Name
	Registration Number
	Professional Title
	Company Name
	Company Address
	Contact Details

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All questions in each applicable section must be answered.

Attachment 1 – Rotating Machine Specifications & Checklist

Installation details	Data
Customer Name	
Customer contact details	
Ergon Energy contact	
Installation approved capacity (kVA)	
Installation approved export (kW)	
Installed capacity (kVA) (Must not exceed approved limit)	
Installed export power limit (kW) (Must not exceed approved export)	
Subject description (plant information) e.g. stand-by generating system at hospital	
Operating mode (Stand-by / Continuous Parallel)	

As installed – Engine/Turbine Technical Data

Parameters	Data
Engine/Turbine type	
Make	
Model	
Rated Power (kWe/kWm)	
Rated Voltage (V)	
Rated Current (A)	

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As installed – Alternator Technical Data

Parameters	Data
Make	
Model	
Rated Power (kVA)	
Rated Current (A)	
Rated Voltage (V)	
Peak Short Circuit Current (kA)	

Manufacturer's specification data sheet/user manual attached Yes ◯ No ◯

As installed - Generating System

Description	Complies	Tested by
Complies with AS 60034.1, AS 60034.22	Yes ◯ No ◯	

Comments
(please supply additional information for any non-compliances and settings as required)

Single Line Diagram (SLD) attached Yes ◯ No ◯

Existing Installation details*	Data
Types	
Capacity	

*Prior to this application

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Attachment 2 – Compliance Checklist

Description	Complies	If No, supply details
Voltage Fluctuation and Flicker	Yes ◯ No ◯	
Export Requirements	Yes ◯ No ◯	
Special Instructions	Yes ◯ No ◯	
Fluctuation and Harmonic Allocations	Yes ◯ No ◯	
Fluctuation and Harmonic Allocations	Yes ◯ No ◯	

Compliance with Standard for HV EG Connections

Clause	Description	Complies
4.7.2	Standards compliance	Yes ◯ No ◯ N/A ◯
4.5.1	Disconnection, Synchronisation and Re-energisation	Yes ◯ No ◯ N/A ◯
4.7.1	Protection device compliance	Yes ◯ No ◯ N/A ◯
5.2.2, 5.2.3, 5.2.7, 5.2.12,	Central Protection, backup anti-islanding protection NVD, GPR	Yes ◯ No ◯ N/A ◯
5.2.4	Overcurrent and earth fault protection	Yes ◯ No ◯ N/A ◯
5.2.5	Reverse power or power limit protection	Yes ◯ No ◯ N/A ◯
5.3.2	Power Quality Response	Yes ◯ No ◯ N/A ◯
4.15	Interlocking	Yes ◯ No ◯ N/A ◯
7	Commissioning	Yes ◯ No ◯
8	Operations and Maintenance	Yes ◯ No ◯

Comments
(please supply additional information for any non-compliances)

Commissioning results attached Yes ◯ No ◯

All questions in each applicable section must be answered.

Attachment 3 – Compliance Report – Commissioning

Commissioning shall include the following information and test certificates are recommended for further evidence:

Compliance with Standard for HV EG Connections

System Details	Complies	Data, provide details (attach docs if required)
Installed system meets all criteria outlined in the Ergon Energy Technical Study Report issued for project	Yes ◯ No ◯	

Rotating Machine

System Details	Complies	Data, provide details (attach docs if required)
AC Output Voltage from EG on commissioning	Yes ◯ No ◯	
Input and Output power from rotating machine on commissioning	Yes ◯ No ◯	
Re-energisation and synchronisation as per standard	Yes ◯ No ◯	
Rotating machine operation as per approved Operating type (Clause 4.3) - Specify	Yes ◯ No ◯	

Protection

System Details	Complies	Data, provide details (attach docs if required)
Tripping and control scheme logic	Yes ◯ No ◯	
Instrument transformer ratios	Yes ◯ No ◯	
GPR details (make, model, serial number)	Yes ◯ No ◯	
Relay settings as per standard	Yes ◯ No ◯	
Relay pickup tests	Yes ◯ No ◯	
GPR – ROCOF (setting)	Yes ◯ No ◯	
GPR – directional power (setting)	Yes ◯ No ◯	N/A ◯

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GPR – negative sequence voltage (setting)	Yes ◯ No ◯	N/A ◯
GPR – negative sequence current (setting)	Yes ◯ No ◯	N/A ◯

Comments
(please supply additional information for any non-compliances and settings as required)

Commissioning results attached Yes ◯ No ◯

Power Quality

System Details	Complies	Data, provide details (attach docs if required)
Flicker	Yes ◯ No ◯	
Harmonics emissions levels (Testing not required if no power electronic converter present)	Yes ◯ No ◯	
Voltage Unbalance (%)	Yes ◯ No ◯	
Power Factor	Yes ◯ No ◯	

Copy of Test Certificates attached Yes ◯ No ◯

Interlocking

System Details	Complies	If Yes, provide details (attach docs if required)
Manual (Key based) or	Yes ◯ No ◯	
Automated	Yes ◯ No ◯	

Copy of prior approved automated design attached Yes ◯ No ◯

All questions in each applicable section must be answered.

Attachment 4 – As Commissioned Drawings

Single Line Diagram and AC Schematics should include:

1. RPEQ Signature
2. NMI, Site name and address
3. GPR settings
4. Rotating machine unit protection details

Single Line Diagram (SLD) attached	Yes ◯	No ◯
AC schematics attached	Yes ◯	No ◯