Compliance Reporting Form

Dynamic Embedded Generation via IES LV connection
>30kVA and ≤1,500 kVA

Certification

CX Ref #:
Ergon Energy WR#:

Date: / /

Embedded Generation via Inverter Energy System (IES) Dynamic Connection– > 30 kVA and ≤ 1,500 kVA
Project Name:
Location:
NMI:

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's Technical Study Report provided for the above stated project.
- STNW1135 - Standard for LV Embedded Generating Connections [version]
- AS/NZS 3000 – Electrical Installations
- AS/NZS 4777 series – Grid connection of energy systems via inverters
- IEC 62116 – Utility-interconnected photovoltaic inverters – Test procedure of islanding prevention measures
- Queensland Electricity Connection Manual [version]

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

- Attachment 1 – PV inverter & Battery Specifications & Checklist
- Attachment 2 – Compliance Checklist
- Attachment 3 – Commissioning Test Results
- Attachment 4 – As Commissioned Drawings

Signature

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

Attachment 1 – PV Inverter & Battery Specifications & Checklist

Installation details	**Data**
Customer Name	
Customer contact details	
Ergon Energy contact	
Installation approved capacity (kVA)	
Installation approved maximum export (kW)	
Installation approved fixed default export (kW)	1.5 kW
Installation approved maximum dynamic import (kW)	
Installation approved fixed import (kW)	1.5 kW
Installed capacity (kVA) (Must not exceed approved limit)	
Installed export power limit (kW) (Must not exceed approved export)	

As installed – PV Rating Data

Parameters	**Data**
Cell/PV/Turbine type	
Peak Power Pmax	
Rated voltage Vmp	
Rated Current Ipm	
Short circuit current Imc	
Open circuit voltage	
Maximum system voltage	
Module Efficiency	

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

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.

All questions in each applicable section must be answered

As installed – Inverter Technical Data

Parameters	Data
Type	
Make	
Model	
Part Number / Manufacturer	
Max. Input DC Power	
Max. Input DC Voltage	
Max. Input Current	
Method of Connection for the Communication System (direct, third party or cloud-based vendor)	
Method of connection of Dynamic EG to the public internet	
SEP2 compliance using Common Smart Invertor Protocol (CSIP-AUS) (direct or third party)	

Clean Energy Council Approved Inverter Used Yes ☐

As Installed – Battery Technical Data

Parameters	Data
Capacity	
Planned Operating Mode	
Max Rate of Change	

Output – Data

Description	Data
Nominal Site Output to Grid	
Max. output current	
Nominal AC voltage range	
Max. efficiency	
Power quality mode	

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All questions in each applicable section must be answered

As installed – Electric Vehicle Supply Equipment [V2G or V2B] N/A ☐

Parameters	Data
Make	
Model	
Capacity	
Planned Operating Mode	
Max Rate of Charge / Discharge	
EVSE Can be Communicated With and Compatible with CSIP-AUS	Yes ☐ No ☐
If yes, confirmation of adherence to dynamic limits	Yes ☐ No ☐
If no, Confirmation EV set to Nil-Export and compliance with import limits as per authorised demand	Yes ☐ No ☐

Clean Energy Council Approved EVSE Yes ☐

As Installed – Inverter Power Sharing Device N/A ☐

Parameters	Data
Make	
Model	
Rated Capacity	

IPSD Design RPEQ Approved Yes ☐ No ☐

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

Single Line Diagram (SLD) attached Yes ☐ No ☐

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All questions in each applicable section must be answered

Existing Onsite Embedded Generating Systems

Existing Installation details (Prior to this application)	**Data**
Types	
Capacity and export	
EG Can Be Communicated With and Adhere to Dynamic Limits	Yes ☐ No ☐
If yes, Confirmation of connection to Gateway device	Yes ☐ No ☐
If no, Confirmation EG set to Nil-Export	Yes ☐ No ☐
Additional Changes made to legacy systems	Yes ☐ No ☐
If yes, add comment	

All questions in each applicable section must be answered.

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 ☐	
Power Factor Limits	Yes ☐ No ☐	

Compliance with Dynamic Standard for LV EG Connections STNW3511

Clause	Description	Complies
4.3.1.3	Export Limit at Connection Point, Maximum and Default Fixed	Yes ☐ No ☐ N/A ☐
4.3.3	Import Limit at Connection Point, Maximum and Fixed	Yes ☐ No ☐ N/A ☐
4.3.4	Export and Import measurement and control	Yes ☐ No ☐ N/A ☐
4.3.5	Phase balance	Yes ☐ No ☐ N/A
4.4	Standards compliance (AS/NZS 4777.2, AS/NZS 4777.1, AS/NZS IEC 62116, SEP2)	Yes ☐ No ☐
4.4.1	Energy Storage Systems (if applicable) compliance to (AS/NZS 5139)	Yes ☐ No ☐ N/A ☐
4.4.3	IPSD Standards Compliance	Yes ☐ No ☐ N/A ☐
4.7.1	Inverter protection settings	Yes ☐ No ☐ N/A ☐
4.7.2	Protection device compliance	Yes ☐ No ☐ N/A ☐
4.7.2, Table 10	Integrated Protection Relay	Yes ☐ No ☐ N/A ☐
4.7.3	Interlocking (if applicable)	Yes ☐ No ☐ N/A ☐
4.7.4.1	Wireless transfer (where used)– complies with delay limits and loss of communications procedure	Yes ☐ No ☐ N/A ☐
4.8	Voltage limit for sustained operation set to 258V	Yes ☐ No ☐ ☐
4.10.1.1 – 4.10.1.5	Power Quality	Yes ☐ No ☐ N/A ☐

4.10.2	Power Quality Mode settings (Region A settings)	Yes ☐ No ☐ N/A ☐
4.11	Communication Systems	Yes ☐ No ☐
6	Testing and Commissioning	Yes ☐ No ☐
7	Operation and maintenance	Yes ☐ No ☐

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

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 LV EG Connections

System Details	Complies	Data, provide details (attach docs if required)
Installed system meets all criteria outlined in the Ergon Technical Study Report issued for project	Yes ☐ No ☐	
Registration with Dynamic Utility Server (https://www.ergon.com.au/network/contact-us/forms/dynamic-embedded-generation-registration-form)	Yes ☐ No ☐	

Inverters

System Details	Complies	Data, provide details (attach docs if required)
Passive anti-islanding tested for conformance, Vnom_max, V<, V>, V>>, f< and f>.	Yes ☐ No ☐	
Tests to prove anti-islanding operation during network outage	Yes ☐ No ☐	
DC input voltage to inverter on commissioning	Yes ☐ No ☐	
AC Output Voltage from inverter on commissioning	Yes ☐ No ☐	
Input and Output power from inverter on commissioning	Yes ☐ No ☐	
Warning signs fitted as per AS/NZS 4777.1 and AS 5033	Yes ☐ No ☐	

Emergency Backstop Mechanism

GSD Details	
Is a GSD installed for each inverter?	Yes ☐ No ☐ N/A ☐
Model	
Serial Number	
Has a Demand Response Site Controller (DRSC) been installed for this premise?	Yes ☐ No ☐
Make/Model	
Serial Number	

GSD Installation as per QECM	Yes ☐ No ☐
Demand Response Device	Inbuilt in inverter ☐ External Device ☐
Functionality Enabled for demand response mode DRM 0 in compliance with AS/NZS 4777.2.	Yes ☐ No ☐
External device installed (if required)	Yes ☐ No ☐ N/A ☐
Verify that response is current: - Measure and record inverter output (AC current) - Confirm 'DRM 0' response of the inverter commences within 2 seconds - Confirming AC current reduces from recorded output, noting this may take a few minutes	Yes ☐ No ☐
Photos of installation attached: • Installation arrangement within switchboard or enclosure • Wiring arrangements of the GSD showing compliance with QECM requirements • GSD serial number	Yes ☐ No ☐

Protection

IPR Details (for IES greater than 200kVA or IPSD>30kVA or where required due to legacy arrangements)	**Data**
Make	
Model	
Serial Number	
Exemption for bulk metered connection	Yes ☐ No ☐ N/A ☐

System Details	**Complies**	**Data, provide details (attach docs if required)**
Tripping and control scheme logic	Yes ☐ No ☐	
Instrument transformer ratios	Yes ☐ No ☐	
Relay settings as per STNW1135 Table 9	Yes ☐ No ☐	

Relay pickup tests	Yes ☐ No ☐	

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

Commissioning results attached Yes ☐ No ☐

Inverter Power Sharing Device

IPSD Installation N/A ☐	**Data**
Aggregated Inverter Rated Apparent Power	
If Greater than 30kVA, Confirm Interface Protection Installed	Yes ☐ No ☐
Installation Compliant with AS/NZS 4777.1	Yes ☐ No ☐
Anti-islanding testing completed (results attached)	Yes ☐ No ☐

Power Quality

Power Quality testing completed	Yes ☐ No ☐
Power Quality test results required to be submitted to DNSP ("PQ Compliance Report")	Yes ☐ No ☐
Where the premises includes more than one connection point, testing has been conducted for each connection point	Yes ☐ No ☐ N/A ☐

System Details	**Complies**	**Data, provide details** (attach docs if required)
Flicker	Yes ☐ No ☐	
Harmonics emissions levels (e.g. 5,7)	Yes ☐ No ☐	
Voltage Unbalance (%)	Yes ☐ No ☐	

Copy of Test Certificates attached	Yes ☐ No ☐
Power quality raw data provided (.xlsx or .csv format)	Yes ☐ No ☐

Interlocking N/A ☐

System Details	**Complies**	**Data, provide details** (attach docs if required)
Manual (Key based) or	Yes ☐ No ☐	

Automated	Yes ☐ No ☐	
If Automated, prior approved automated design attached	Yes ☐ No ☐ N/A ☐	

Attachment 4 – As Commissioned Drawings

1. RPEQ Signature
2. NMI, Site name and address
3. IPR settings
4. Inverter protection details

Single Line Diagram (SLD) attached	Yes ☐	No ☐
AC schematics attached	Yes ☐	No ☐
GSD Installation photos attached	Yes ☐	No ☐
Evidence of Registration with Dynamic Utility Server	Yes ☐	No ☐