Compliance Reporting Form

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

Certification

CX Ref #:
Energex WR#:

Date: / /

Embedded Generation via Inverter Energy System (IES) > 30 kVA and ≤ 1,500 kVA –
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:

- Energex's Technical Study Report provided for the above stated project.
- STNW1174 - 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 – Engine/Turbine/Alternator 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

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All questions in each applicable section must be answered.

Attachment 1 – PV Inverter & Battery Specifications & Checklist

Installation details	**Data**
Customer Name	
Customer contact details	
Energex 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)	

As installed – IES 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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As Installed – Inverter Technical Data

Parameters	Data
Type	
Make	
Model	
Part Number / Manufacturer	
Max. Input DC Power	
Max. Input DC Voltage	
Max. Input Current	

Clean Energy Council Approved Inverter Used Yes ☐

As Installed – Battery Technical Data

Parameters	Data
Capacity	
Planned Operating Mode	
Max Rate of Change	

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Output – Data

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

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

AC Grid frequency adjusted range	Yes ☐	No ☐
Single Line Diagram (SLD) attached	Yes ☐	No ☐

Existing Onsite Embedded Generating Systems

Existing Installation details*	Data
Types	
Capacity	

*Prior to this application

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 Standard for LV EG Connections

Clause	Description	Complies
4.3.1.3	Power limiting (for partial-export and non-export systems only)	Yes ☐ No ☐ N/A ☐
4.3.4	Emergency Backstop Mechanism	Yes ☐ No ☐ N/A ☐
4.4.1	Energy Storage Systems (if applicable) compliance to AS/NZS 5139	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 7	Grid Protection Relay	Yes ☐ No ☐ N/A ☐
4.7.3	Interlocking (if applicable)	Yes ☐ No ☐ N/A ☐
4.7.4.1	Wireless transfer (where used) – Trip Time results	Yes ☐ No ☐ N/A ☐
4.8	Voltage limit for sustained operation set to 258V	Yes ☐ No ☐ N/A ☐
4.10.1.1 – 4.10.1.5	Power Quality	Yes ☐ No ☐ N/A ☐
4.10.2	Power Control Mode settings (Region A settings)	Yes ☐ No ☐
6	Commissioning	Yes ☐ No ☐

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Clause	Description	Complies
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 Energex's Technical Study Report issued for project	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 ☐	

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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 ☐ N/A ☐
Make/Model	
Serial Number	

Protection

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 standard	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 ☐

All questions in each applicable section must be answered.

Protection cont.

GPR Details	Data
Make	
Model	
Serial Number	

Power Quality

Power Quality testing is required Yes ☐ No ☐

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 ☐

Interlocking N/A ☐

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

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. Inverter protection details		
Single Line Diagram (SLD) attached	Yes ☐	No ☐
AC schematics attached	Yes ☐	No ☐