Ref: CX### WR#

DD/MM/YYYY

Dear Sir/Madam

Subject: Configuration of Installation e.g.: 100kVA with 40kW Partial Export/ Full Export Solar PV with 150 kVA NIL Export Bumpless transfer generator – Project Name, Location

Please find attached our submission for the above-mentioned project.

This letter is to certify that as a Registered Professional Engineer of Queensland and by virtue of my training and experience, the submission documentation issued together with this letter complies with the requirements of the latest revisions of the following:

- Site Specific Enquiry Response
- STNW1174 Version [#] Standard for LV Embedded Generation Connections, including the relevant standards applicable to this installation therein
- Queensland Electricity Connection Manual Version [#]

EG #	Size	Туре	Operation	Units
1	110kVA	Solar PV (New)	Export	2 x 55kVA inverters
2	50kVA	Battery (Existing)	Non-export	1 x 50kVA battery inverter
3	200kVA	Rotating Machine	Non-export (Bumpless)	1 x diesel generator
TOTAL	Capacity	360kVA	Export	110kW

Details of generating system(s): [example only]

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

- Single line diagram of the generating system to the connection point, including protection relay arrangement (signed by RPEQ).
 - Inverter power quality settings can be simplified with confirmation of use of Australia A regional settings (i.e., detailed settings parameters not required).
- Protection and control line diagram including inverter, interface protection relay and instrument make, model, settings, and instrument transformer details (signed by RPEQ)
- DNSP Approved Interface Protection Relay- Name, Make and Model (list available on DNSP Website), as relevant
- Evidence of adherence to the Emergency Backstop Mechanism (refer to QECM 8.10.2 and the QECM drawing supplement for guidance on connection arrangements), including Generator Signaling Device (GSD) details: Make,

Model and Serial Number, together with the connection diagram of the GSD (for any installations is >10kVA of PV systems)

- Machine impedance characteristics
- Synchronisation Operational sequences (On loss of supply, on mains restoration, and testing sequences)
- Functional description of the intended operation of the proposed generating system including the bumpless transfer scheme
- Generator Technical Data sheet (rotating machine and IES as relevant)
- Voltage Rise Calculations -the EG System has been designed so that there is a maximum 2% voltage rise from the export EG System to the Connection Point
- Battery storage system details (if applicable), installed to AS/NZS 5139
- Details of any interlocking systems (if applicable refer to <u>Interlocking Requirements</u> <u>Guideline</u> if guidance is required).
- Inverter Power Sharing Device details, where relevant
- EVSE (electric vehicle service equipment) details, where V2G or V2B (if applicable).

Summary Table [amend as relevant]

Documents	Submitted	Provide details
Single Line Diagram (SLD)	Yes 🗌 No 🗌	
Power Quality Settings	Yes 🗌 No 🗌	
Protection Report	Yes 🗌 No 🗌	
IPR Details	Yes 🗌 No 🗌	
Emergency Backstop Mechanism Evidence (GSD Details)	Yes 🗌 No 🗌	
Synchronous Operational Sequence	Yes 🗌 No 🗌	
Bumpless Transfer Scheme	Yes 🗌 No 🗌	
Generator Technical Data Sheets	Yes 🗌 No 🗌	
Voltage rise calculations	Yes 🗌 No 🗌	
Battery Storage details	Yes 🗌 No 🗌	
Inverter Power Sharing Device (IPSD) details	Yes 🗌 No 🗌	
EVSE (Electrical Vehicle Supply Equipment) details, where V2B or V2G	Yes 🗌 No 🗌	

Should you have any queries, please contact the undersigned.

Signed

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