Preliminary prototype confirmation

Manufacturer / Applicant	**Bejing Goldwind Carbon Neutral Energy Co., Ltd.** **No. 8, Boxing 1st Road** **Beijing Economic & Technological Development Zone** **Bejing 100176, P.R. China**
Product type	**Grid-tied bidirectional battery converter**
Model	**GoldConv A200Pro-D/-S**

		215 kW/ 690 Vac	**205,7 kW / 660 Vac**	**193,1 kW / 620 Vac**	**186,9 kW / 600 Vac**	**149,6 KW / 480 Vac**	**124,6 KW / 400 Vac**
Specifications	Nominal apparent power	215 kVA	205,7 kVA	193,1 kVA	186,9 kVA	149,6 kVA	124,6 kVA
	Nominal active power	215 kW	205,7 kW	193,1 kW	186,9 kW	149,6 kW	124,6 kW
	Nominal voltage	690 V	660 V	620 V	600 V	480 V	400 V
	Nominal frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz

Description

Bidirectional converter for feeding power generated by battery modules into the public AC grid (discharging operation mode, PGU) or draw energy from the public AC grid to charge the battery (charging operation mode, Load).

Standards

VDE-AR-N 4110:2023-09
Technical requirements for the connection and operation of customer installations to the medium voltage network (TAR medium voltage)

VDE-AR-N 4120:2018-11 + A1:2024-04
Technical requirements for the connection and operation of customer installations to the high voltage network (TAR high voltage)

VDE-AR-N 4130:2018-11
Technical requirements for the connection and operation of customer installations to the extra high voltage network (TAR extra high voltage)

FGW TG8 Rev. 9:2019-02
Certification of the Electrical Characteristics of Power Generating Units, Systems and Storage Systems as well as their Components on the Grid

This preliminary prototype certificate confirms that the above-mentioned PGUs are prototypes according to VDE-AR-N 4110/VDE AR-N 4120/VDE AR-N 4130 and FGW TG 8 Rev.9: The PGU are characterized by major technical developments or innovations (see Annex 1 and Annex 3).

It is also confirmed that the general ability of the PGU to fulfil the requirements of the VDE-AR-N 4110/VDE AR-N 4120/VDE AR-N 4130, based on manufacturer data of the electrical properties of the PGUs (see Annex 2). It is expected that in the scope of a certification the requirements of Annex A of the FGW TG8 will be fulfilled.

Restriction

A test terminal strip must be installed separately if necessary.

Commission of the first power generating unit prototype in Germany Date of commission not confirmed

"This Document is an English translation of the original certificate in German language with number U25-0539_1"

Project number: **25TH0126** **Certification program:** **NSOP-0032-DEU-ZE-V10**

Confirmation number: **U25-0539_1** **Date of issue:** **2026-04-09**

Certification body

Georg LORITZ
Lab Supervisor Energy Systems

Accreditation

DAkkS Deutsche Akkreditierungsstelle D-ZE-12024-01-00

Description of the revisioning of the preliminary prototype confirmation U25-0539_1	
Rev. 0	First issue
Rev. 1	Addition of an extra model for the 620 V mains voltage range Comprehensive adjustment of the series' rated outputs to a maximum of 215 kVA and 215 kW instead of the previous 204.4 kVA and 184 kW Update of the manufacturer's declaration

Annex 1	
This certificate confirms that the mentioned power generating unit (PGU) according to FGW TR 8 is a prototype. For this purpose, the PGU is described below, and the main technical developments or innovations are presented. After commissioning the first unit of the specified type, the certification body must be notified of the commissioning date. The preliminary prototype confirmation is then replaced by a prototype confirmation, which is valid for 2 years after the notified commissioning date. After that, the unit must have a valid unit certificate.	
FGW TG 8 (Rev. 9)	
Requirements	**Comment / Verdict**
2.11 Equipment prototypes	
2.11.1 Prototype regulation	
A prototype is the first piece of equipment of a type displaying fundamental technical developments or innovations, and all additional pieces of equipment of this type commissioned within two years of commissioning the first piece of equipment of this type	Considered (Annex 3).
The regulation and periods for equipment prototypes in a PGS can be found in the GCR.	Considered. according to VDE-AR-N 4110/VDE AR-N 4120/VDE AR-N 4130 applies: for production plants with production units of the same prototype, the plant certificate and the declaration of conformity must be submitted within one year after the first prototype has received a unit certificate
2.11.2 Prototype declaration	
The prerequisite for a certification body issuing a prototype confirmation is a manufacturer's declaration regarding the following points:	
• statement on the partial or complete conformity with one or more GCR;	Considered (Annex 3)
• declaration that this relates to a substantial technical development or innovation	Considered (Annex 3)
• the identification of differences to any existing and previously certified equipment;	Considered (Annex 3).
• additional technical data corresponding to the requirements or the relevant GCR.	Considered (see Annex 3).
Substantial technical developments and innovations are usually present if components or software versions have been modified such that the electrical behaviour of the generation unit on the grid has significantly changed or an equivalent electrical behaviour has been achieved through a different technical development and innovation.	Since the product is intended to achieve unit certification in accordance with VDE-AR- N 4110/VDE AR-N 4120/VDE AR-N 4130 and no certification has yet been obtained, the software version used is a significant technical development/innovation.
Based on the manufacturer's declarations submitted regarding the prototype, the certification body will assess whether this is a technical development and certifies this in the form of a prototype confirmation.	Considered (see Annex 3)
The certification body must clearly identify in the prototype confirmation that the prototype would fundamentally be able to meet the requirements of the relevant GCR in terms of electrical characteristics and functions of the operating equipment. The requirements of the GCR for the test scope for the prototype confirmation must be taken into account (to the extent present).	Considered (see Annex 3)

Annex 2

This certificate confirms that the named generating unit (PGU) is able to meet the requirements for the electrical properties of a generating unit according to VDE-AR-N 4110/VDE AR-N 4120/VDE AR-N 4130. For this purpose, the conformity of the electrical properties of the PGU with the requirements of the VDE-AR-N 4110/VDE AR-N 4120/VDE AR-N 4130 is verified as described below:

Type of equipment	EZE			Component		
	Photovoltaic (PV)	Storage	ORC	EZA-Regler	Component circuits	Interface protection
	☐	☒	☐	☐	☐	☐
Note	The following points 1), 2) and 4) are to be applied			The following points 1), 2), 3) and 4) are to be applied		

VDE-AR-N 4110		
BV-No	**Requirements**	**Comment / Verdict**
12 Regulation for prototypes		
1)	A prototype is the first power generating unit of a type presenting substantial technological developments or innovations and all other power generating units of this type put into operation within two years after the commissioning of the first power generating unit of this type. NOTE 1 This definition corresponds to the term's definition given in SDLWindV [1]. There is no relation to the term "pilot wind turbine" (de: Pilotwindenergieanlage) used in the EEG [6]. Technological developments and innovations are generally considered to be substantial where components or software versions are changed so that the electrical behaviour of the power generating unit at the network changes significantly and a unit certification of this new type is required.	Considered (see Annex 3).
2)	For the prototype of a power generating unit the requirements of this VDE application guide apply. For these prototypes, a prototype confirmation, in which the certification body confirms a substantial technological development or innovation based on a manufacturer declaration, is sufficient, instead of the unit certificate, for a period of two years after commissioning of the first power generating unit prototype in Germany. The certification body shall also check and set out reproducibly in the prototype confirmation, whether the prototype is generally capable of meeting the requirements of this VDE application guide for the electrical properties of the power generating unit. This is based on an electrical properties data sheet prepared by the manufacturer of the power generating unit. For prototypes commissioned before 2019-04-27, the above-mentioned period starts 2019-04-27.	Considered.
3)	For components within the power generating plant, for which a component certificate is required, the prototype regulation can be applied in analogy	Not applicable.

Annex 2		
BV-No	**Anforderungen**	**Comment / Verdict**
4)	In order to allow the certification body to carry out the required plausibility test, the data sheet of the power generating unit shall contain at least the following information: - electrical data (nominal and rated quantities); - schematic overview circuit diagram of the power generating unit with all relevant components; - operating ranges of the power generating unit: • limits in quasi-steady-state operation, • reactive power adjustment range, • FRT limit curve (U/t diagram); - protection functions with setting ranges: • decoupling protection, • self-protection; - active power control: • power/frequency behaviour, • active power gradient; - reactive power control: - dynamic reactive current feed-in: • basic functionality; - declaration of the manufacturer stating that the power generating unit has been designed so that the requirements of this application guide for the power generating unit can be complied with At the latest after expiry of the above-mentioned period, a unit certificate is required. NOTE 2 If the unit certificate is available prior to expiry of the two-year term after commissioning the first power generating unit of this type, it can still be a prototype.	Considered. Data from the manufacturer are available (see Annex 3). Results of the plausibility check see the following table.
Plausibility test		
a)	Electrical data (nominal and rated quantities)	Fulfilled (see Annex 3)
b)	schematic overview circuit diagram of the power generating unit with all relevant components;	Fulfilled (see Annex 3)
c)	operating ranges of the power generating unit: • limits in quasi-steady-state operation, • reactive power adjustment range, • FRT limit curve (U/t diagram);	Fulfilled (see Annex 3)
d)	protection functions with setting ranges: • decoupling protection, • self-protection	Fulfilled (see Annex 3) under the following condition: The PGU does not provide a test terminal for on-site testing. A test terminal must be installed on plant level.
e)	active power control: • power/frequency behaviour, • active power gradient;	Fulfilled (see Annex 3)
f)	Reactive power control	Fulfilled (see Annex 3)
g)	dynamic reactive current feed-in: • basic functionality	Fulfilled (see Annex 3)
h)	Declaration of the manufacturer stating that the power generating unit has been designed so that the requirements of this application guide for the power generating unit can be complied with	Fulfilled (see Annex 3)