BRILON CHARGING STATION - TECHNICAL DATA SHEET

The company Centrotherm Systemtechnik GmbH built a publicly accessible charging park at its site in Brilon, equipped with a Hypercharger with a rated power of 300 kW.

Due to the issue that the grid connection point can only deliver 100 kW, a concept was developed to enable charging with 300 kW. The concept includes a NEWTRON battery storage system, the HEC3 (the intelligent energy management system) and a PV system.

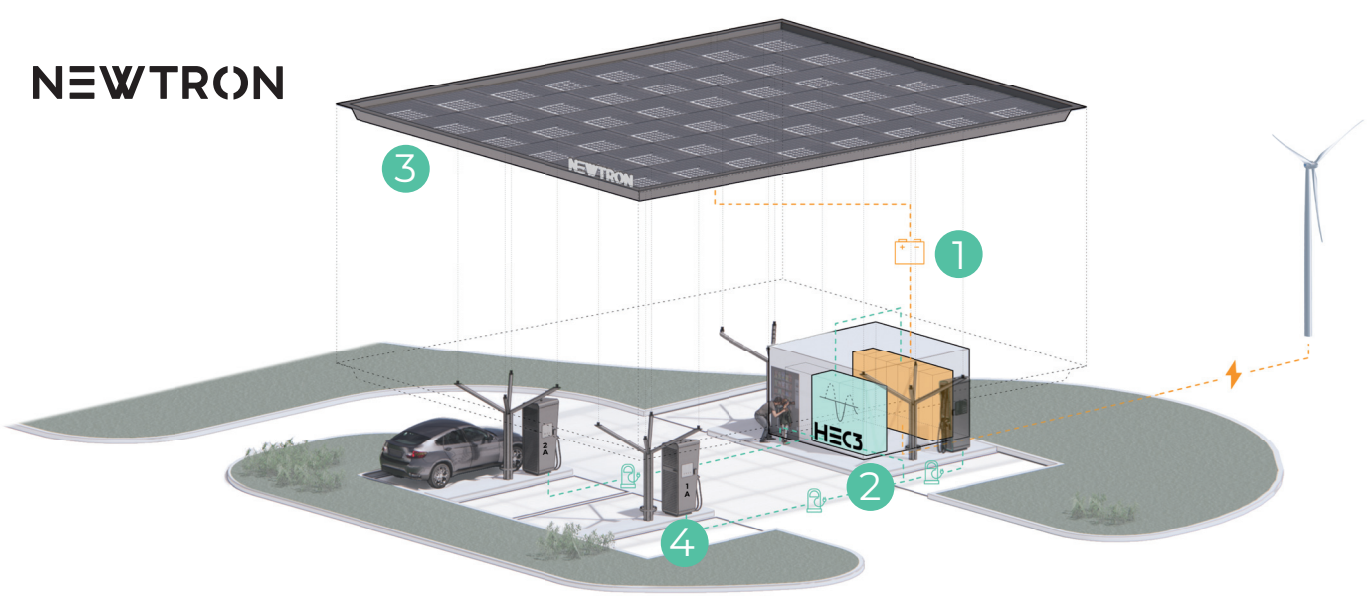
Through the targeted charging and discharging of the battery storage, the expansion of the grid infrastructure can be avoided. The high power consumption of the Hypercharger is completely balanced by utilizing the battery system.

The station is additionally designed in such a way that another Hypercharger and two AC charging stations are planned to be installed, so that 6 vehicles can be charged at the same time without exceeding the 100 kW from the grid feed.

Virtual enlargement of the network

Peak shaving

Reliable energy



1 **BATTERY SYSTEM: 230 kWh WITH 2C**

2 **HEC3: INTELLIGENT CONTROL OF ENERGY LOADS AND SOURCES**

3 **PV INSTALLATION: RENEWABLE ENERGY FROM THE ROOF**

4 **CHARGING STATION: WITH 300 kW CHARGING POWER**

NEWTRON battery system	
NEWTRON Battery Cell Chemistry	LiFePO4
NEWTRON Batterie-Module NBM	51,2NBM160
Number of battery racks	2
Number of NBM	28
DC rated voltage	716,8 V
Capacity	320 Ah
Gross nominal energy	229,8 kWh
DoD (in %)	80
Gross nominal energy	183,68 kWh
C-Rate	2
Max. Rated power	360 kWh
Charging cycles	6000 @ 80% SoH*
Cabinet dimensions (WxDxH)	2500x650x1860 mm
Weight	2542,4 kg
Number of inverters	4
Inverter rated power	4x90 kW
AC rated voltage	400 3VAC

*6000 cycles or 5 years whichever comes first are guaranteed at SoH (State of Health) of 80%.

HEC3	
Description	Responsible for the intelligent control and visualization, of energy loads and sources at the site.
Communications interface	Modbus TCP/IP
Display	15 inch HMI

PV system	
Nominal power per module	115 W
Number of modules	126
Power	14,49 kWp

Charging station (Alpitronic Hypercharger HYC 300)	
Number of charging station	1
Nominal power	300 kW

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Status January 2023