

Giraffe 2.0 charging station for electrical vehicles with 2 x 22.1 kW

The Giraffe 2.0 is a hybrid power station designed to charge all types of electrical vehicles with energy from the wind and sun. The construction consists of a wooden structure glued together holding 24 solar panels and one wind turbine sitting on the top 12 m from the ground. The design was uncovered during Asia's largest design convention – Business of Design Week in Hong Kong. Thanks to the rounded and linear curve design, 40 m² of solar panels fit onto the Giraffes 24.6 m² footprint on the ground. The concept of energy density i.e. how much energy is produced per unit area per year, is important in many urban areas where land prices are high. The Giraffe's energy density of 555kWh/m² beats all records compared with other carport charging stations. This is partly because it accommodates so many solar panels with its double curved design, but also because it has a wind turbine integrated into the construction.



The Giraffe is designed to protect two cars and covers a total area of two parking spaces. In other words, there is no loss in parking space when installing Giraffes that are delivered with a double-quick-charger from Chargestorm that gives 2 x 22.1 kW via 32 A 400 V.

The Giraffe can also be equipped with fast-chargers.

The Giraffe has a yearly energy production of around 15,000 kWh during normal conditions, which is enough for two electric cars to drive around the globe twice.

When the Giraffe has produced renewable energy for 25 years, the metals and wood can be recycled. The Giraffe doesn't leave any left-over concrete in the ground and the screw foundation is removed and recycled. The wind generator then gets upgraded with new blades and ball bearings.

COMPUTATION	UNIT COMPARRISON	STANDARD	GIRAFFE
Wood vs Steel	4.2 m ³ vs 1 500 kg/m ³		6 300 kg
Screw vs Concrete	13.2 ton vs 400 kg _{CO2} /ton		5 300 kg
Ecosolar panel vs solar panel	65 kg vs 178 kg _{CO2} /panel (24 ecosolar panels give a saving of 2.7 ton)		2 700 kg
Electric car vs diesel	10% usage vs 8760 h/yr ´ 22 kW ´ 5.7 km/kWh ´ 0.133 kg _{CO2} /km	14 700 kg/yr	14 700 kg/yr
Wind power	6 500 kWh/yr vs 0.3 kg/kWh		1 950 kg/yr
Solar Power	7 500 kWh/yr vs 0.3 kg/kWh		2 250 kg/yr

The Giraffes Accolades

Support from the Swedish Energy Agency for the development of the Giraffe 2.0 with the motivation: "The Giraffe is not only a good technical innovation but also a social innovation that brings renewable energy closer to our every-day life".



The first Giraffe (1.0) was produced at the same time the city of Malmö was hosting the Eurovision Song Contest in 2013 and was well greeted with the contests audience as seen with these facebook pictures:



The European Commission "seal of excellence" for the Giraffe 2.0 as a project for European Electric Car Charging.



The Giraffe is the first renewable energy solution in the world to get the international consumer label based on certification of SP Sveriges Tekniska Forskningsinstitut (Sweden's Technical Research Institute).



<http://www.sp.se/sv/index/services/certprod/certprodprofil/energi/vind/Sidor/default.aspx?cert=AX61089>

The Giraffe won the Swedish Windpower Association's prize in 2016: <https://www.svenskvindkraft.org/in-english/>

The Giraffe has been selected as the only electricity provider to provide all electricity that is consumed by the Science Village Information Center that welcomes visitors from all around the world to ESS and MAX IV.

Information Center

Science Village Scandinavia

Brunnshög – Lund

Powered by the Giraffe 2.0



The Giraffe therefore has the potential to act as a clean source of energy for more than just electric cars such as day care, schools, tourist centres and museums.

In June 2016 all Giraffes in Malmö were identified as popular poke-stops for Pokémon Go:



We are proud that the Giraffe 2.0 was co-designed with Santiago Calatrava and his Chief Designer Mark Pfisterer – the brains behind the Turning Torso and dozens of other iconic buildings around the world:



For COP 22 in Marrakesh, UNIDO asked InnoVentum to install three EV charging carports – of course including the Giraffe 2.0:



Please follow the Giraffes energy production in real time from the computer or mobile phone by clicking on the following link: <http://live.innoventum.se/demo-site/>



Prices for the Giraffe start from **€55,000 + VAT**
Read more at: www.innoventum.se/giraffe-2-0/