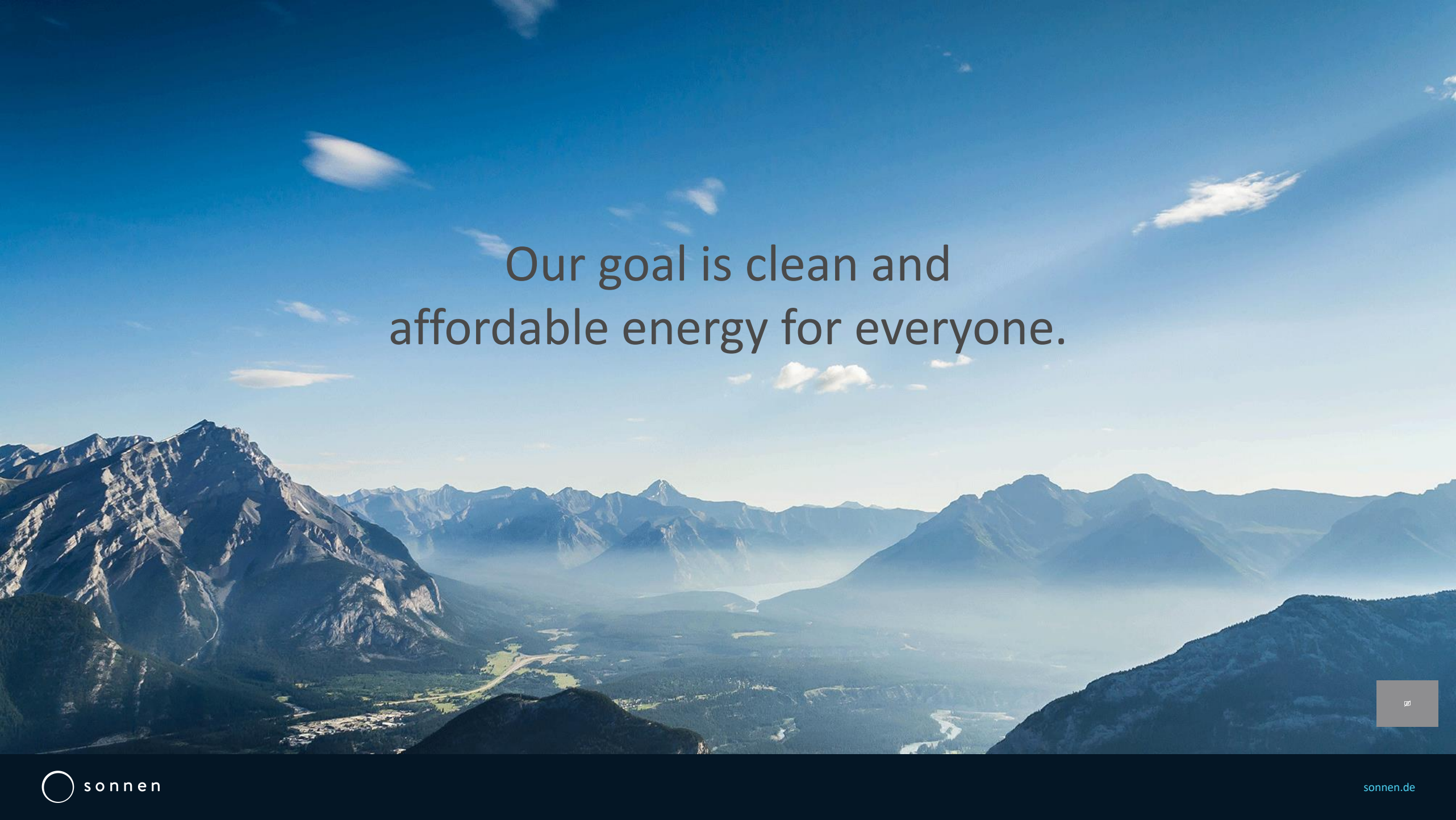




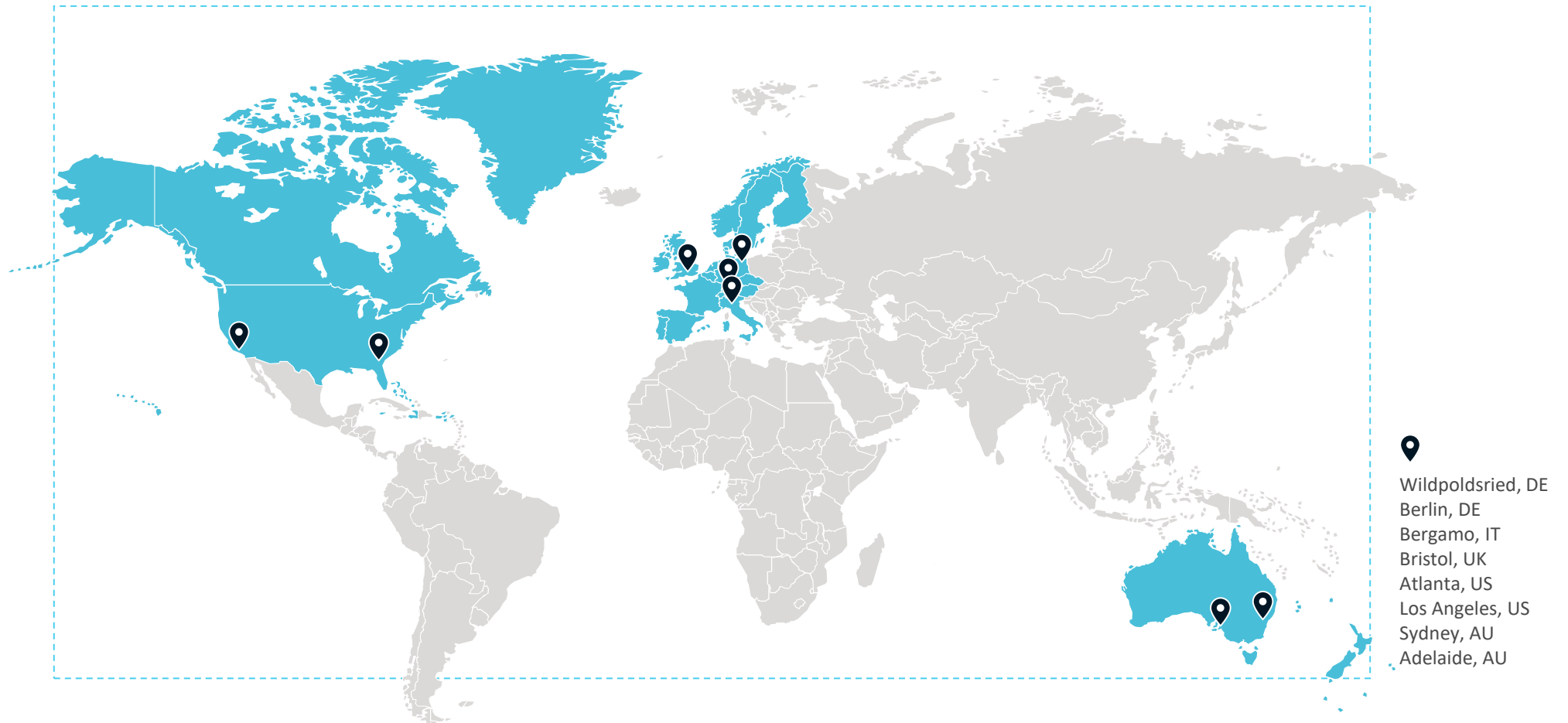
sonnen

energy is yours



Our goal is clean and
affordable energy for everyone.

Locations.

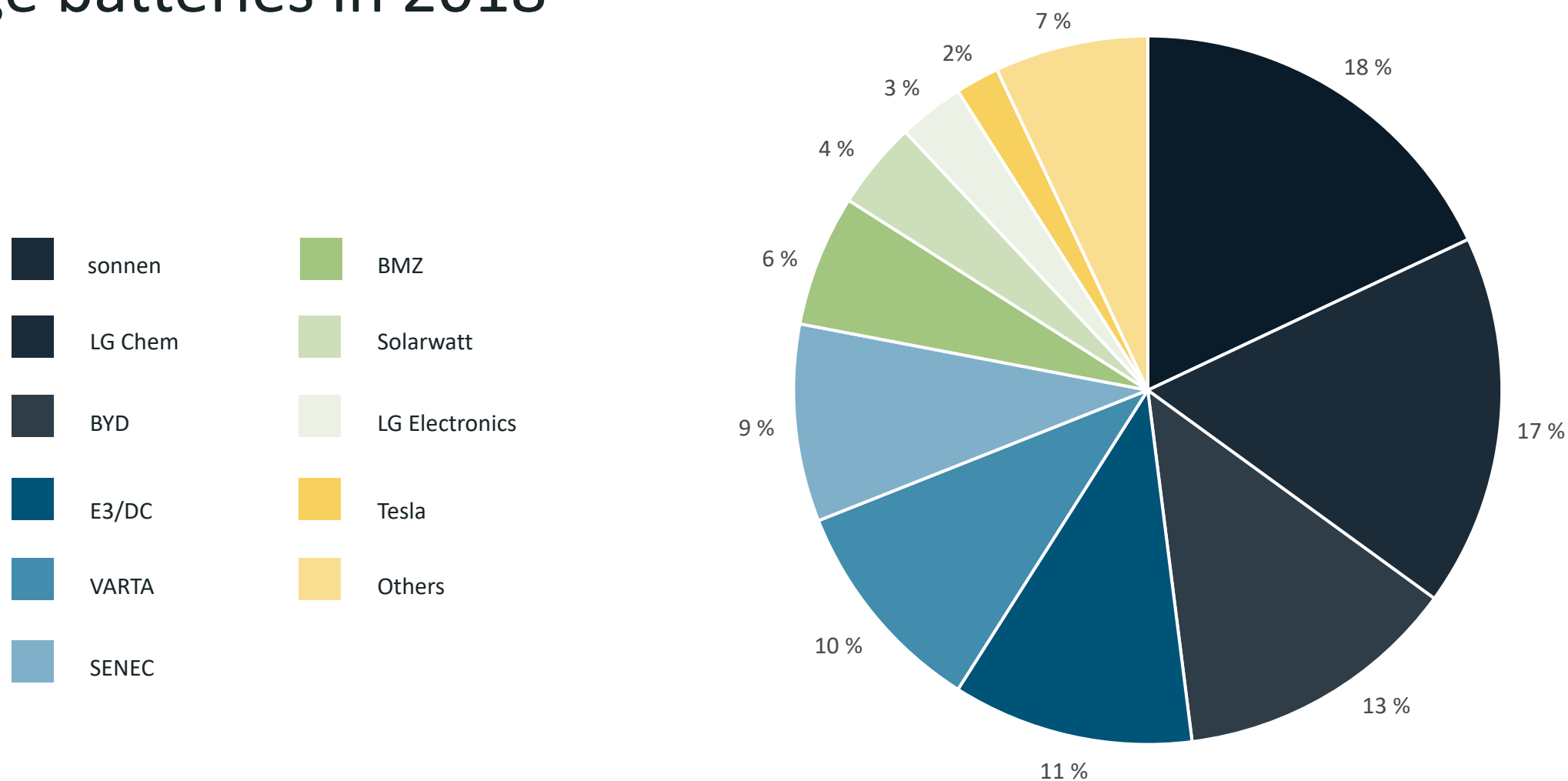


Who we are.

sonnen

- ... was founded in 2010 by Christoph Ostermann and Thorsten Stiefenhofer
- ... is one of the world's largest manufacturers of battery storage
- ... is one of the fastest growing technology companies in Europe
- ... is the operator of the world's largest virtual battery
- ... has received many national and international awards for innovation and growth
- ... has already installed more than 50,000 storage batteries worldwide
- ... operates with the sonnenCommunity, a one of a kind energy community

German market share of residential storage batteries in 2018



Source: EuPD Research 5/2019

Our product history.



sonnenBatterie
classic

2010



sonnenBatterie
classic 2.0

2011



sonnenBatterie
classic 2.0, comfort

2012



sonnenBatterie
classic 2.0, comfort

2013



sonnenBatterie
classic 2.0, comfort,
eco 5.0

2014



sonnenBatterie
eco 7.0

2015



sonnenBatterie
eco 8.0
sonnenCommunity

2016



sonnenBatterie
city
sonnenCommunity
sonnenFlat

2017



sonnenCharger

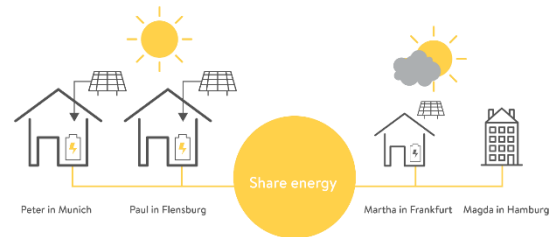
2018

The energy supply of the future.

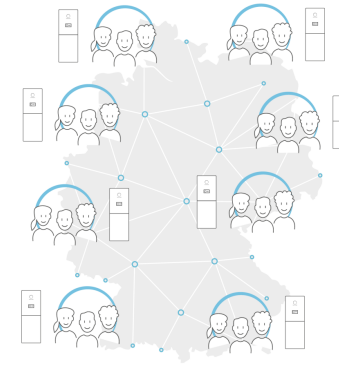
Step 1
sonnenBatterie



Step 2
sonnenCommunity



Step 3
sonnenFlat



Step 4
sonnenCharger



The sonnenBatterie.

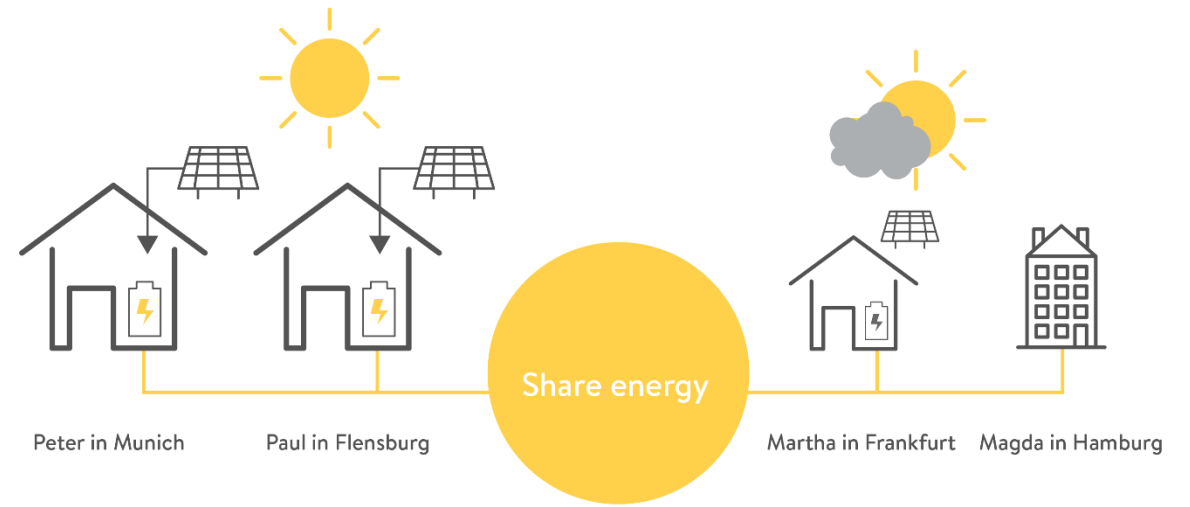
The sonnenBatterie is the world's best-selling electricity storage and reliably supplies over 50,000 households with self-generated electricity. As an interface to the sonnenCommunity, it ensures that people can share their electricity with others. What's more, the aggregation of thousands of sonnenBatteries into a virtual power plant facilitates the stabilisation of the power grid.

- 10-year full warranty
- Extra-long lifespan with over 10,000 charging cycles
- Top quality "Made in Germany"
- Modern, compact all-in-one system
- Smart Home-ready
- Highly scalable
- Safest, most durable cell technology made of lithium iron phosphate
- Intuitive control via touch display, app or portal



The sonnenCommunity.

- The sonnenCommunity is the first decentralised energy system that allows its members to share electricity independently.
- Via Europe's largest electricity-sharing platform, members can transparently share clean electricity with each other. Surplus electricity goes into a virtual electricity pool. Those who need it can use it there.
- Thanks to the intelligent network of members, the sonnenCommunity can flexibly manage supply and demand and directly offset the differences between generation and consumption.
- Existing electricity companies will thus be replaced by many smaller, decentralised energy producers. The energy revolution is happening at home.



The faces of the sonnenCommunity.

https://globe.sonnenbatterie.de

Live Stories Kennenlernen

Ort finden

Familie Hendrick
83413 Fridolfing

Kapazität	8 kWh
Autarkie	79 %
PV-Größe	8,7 kWp

CONNECT

Lisa Lebert
83026 Rosenheim

Kapazität	8 kWh
Autarkie	87 %
PV-Größe	9,7 kWp

CONNECT

Alois Lacher
83253 Rimsting

Kapazität	8 kWh
Autarkie	90 %
PV-Größe	9,4 kWp

CONNECT

Familie Piesker
83026 Rosenheim

Kapazität	10 kWh
Autarkie	87 %
PV-Größe	9,8 kWp

CONNECT

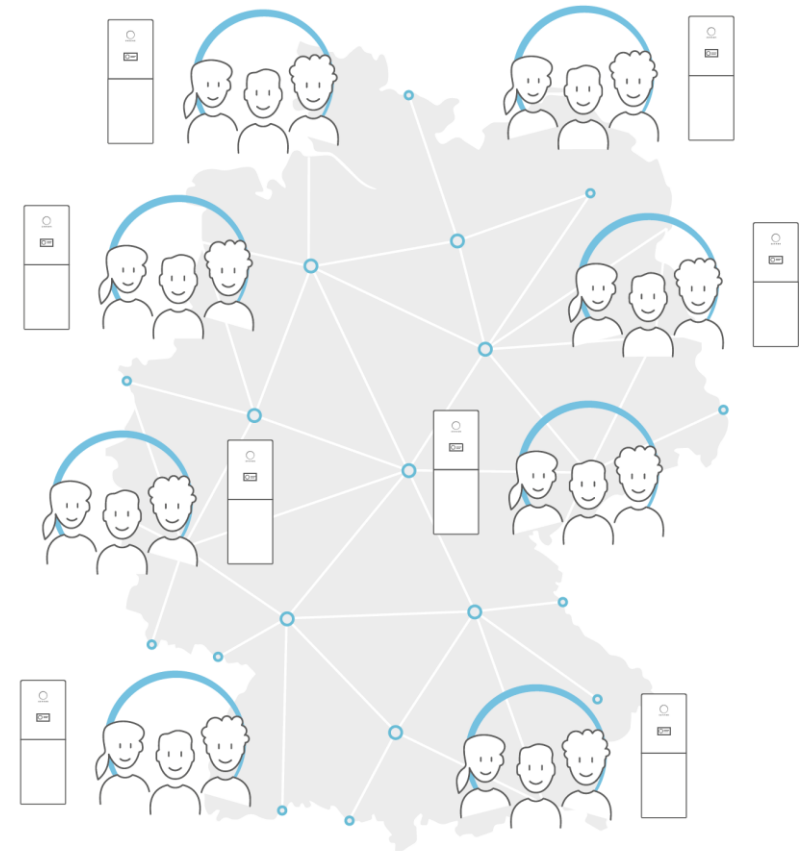
Jetzt Strom für 0 Euro sichern!

The sonnenFlat.

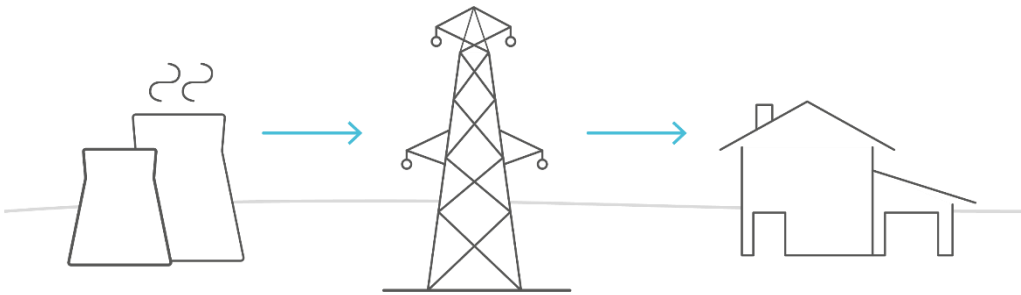
Prequalified

The sonnenCommunity stabilises the electricity grid

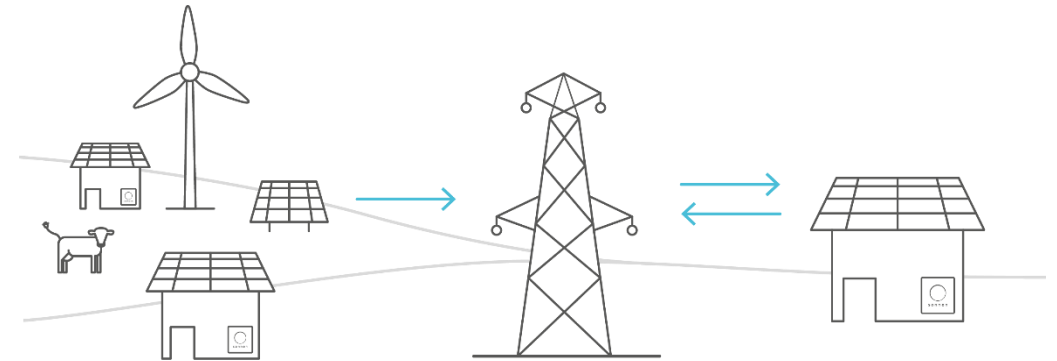
- Thousand of sonnenBatteries are digitally networked and aggregated into a large, virtual power plant.
- When there are transmission bottlenecks in the grid, the mass storage can supply or absorb electricity as needed and thus contribute to stabilising the grid.
- Energy from renewable sources, which are heavily dependent on the weather, can thus be more flexibly controlled and better exploited.
- This storage capacity, which is being marketed on the energy market, generates revenue and makes it possible to offer the sonnenFlat rate.
- This means up to 800 kWh of free electricity, depending on the chosen package and the respective annual electricity consumption of a household.



The transformation of the energy system.

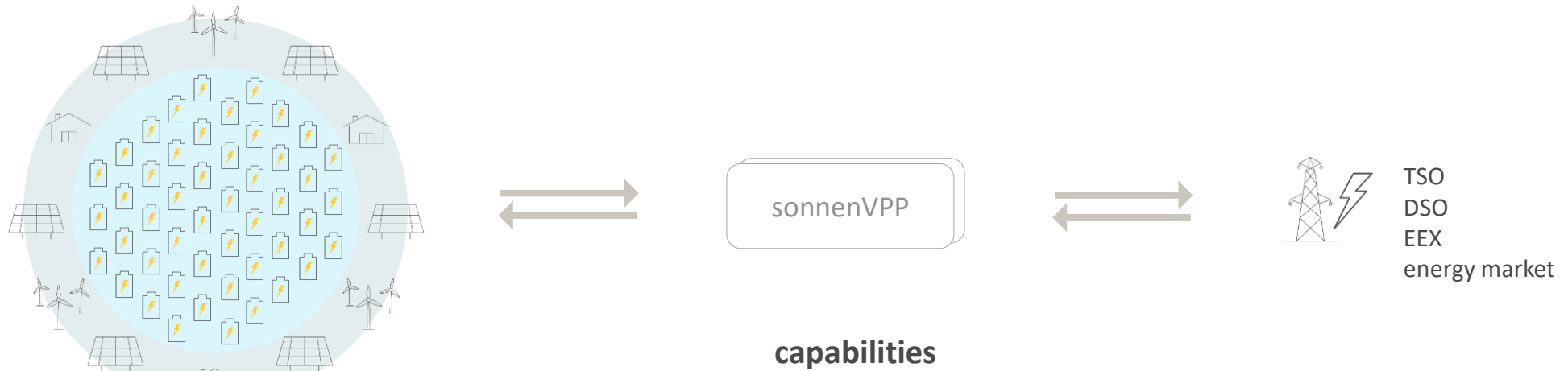


Conventional energy system
centralised · environmentally harmful · analogue



Future energy system
decentralised · clean · networked

sonnenVPP, overview.

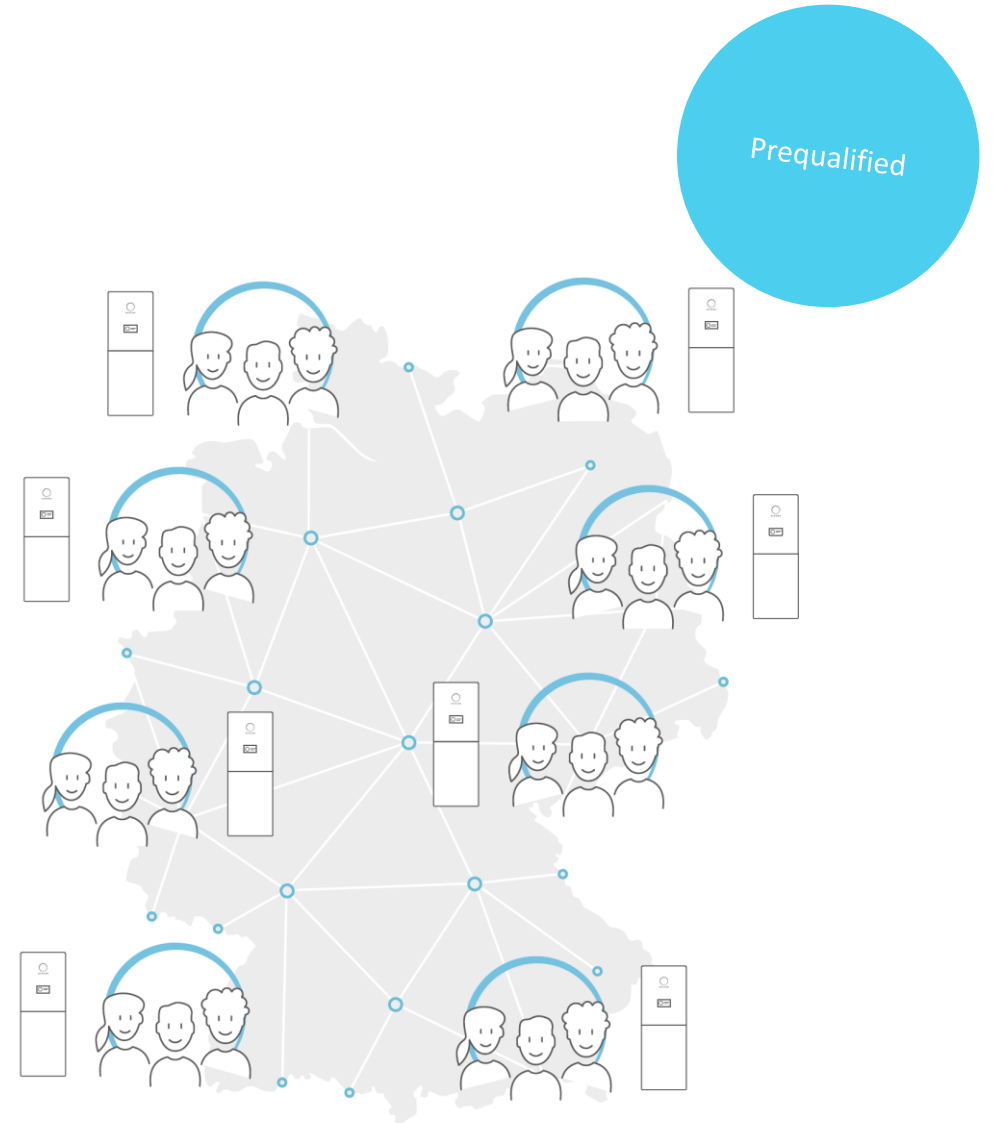


- Frequency Response (PRL, FCR, FFR, FCAS ...), with local AI (!)
- Ancillary Services (SRL, Feed-In, ...)
- Flexibility trading in wholesale power markets
- Demand Response
- DSO support (Redispatch, ...)
- Balancing group management
- Forecasting

Tennet – Germany.



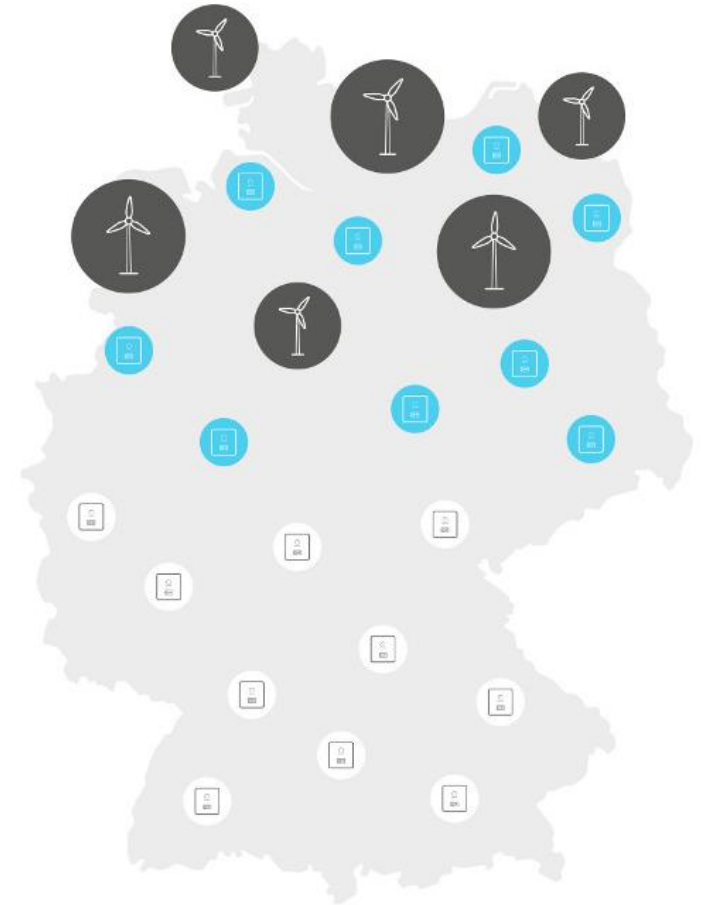
- Thousand of sonnenBatteries are digitally networked and aggregated into a large, virtual power plant.
- sonnen received Pre-qualification from the transmission system operator TenneT to provide primary balancing power using its Germany-wide network of residential battery storage systems.
- TenneT's certification process required sonnen to discharge 1 MW of power to the grid and then recharge that amount back again within 30 seconds.



Tennet II – Germany.



- TenneT and sonnen complete a blockchain project that is unique in the world & demonstrates how the networked storage systems can cope with not only primary balancing power but also redispatch.
- The pilot project shows how decentralized home storage systems can be networked using blockchain technology via open-source-based solution from IBM.



Mandalay Homes – USA.



- When completed, Mandalay Homes' Jasper development project will consist of 2,900 homes, each with local renewable solar.
- The community will consist of about 29 MWh of clean energy storage capacity and local generation on every home. It will represent the largest master-planned community with energy storage in the world.
- It has the capability to dynamically interact with the precise needs of the electricity grid on a day-by-day basis to increase grid efficiency and lower operating costs.



Centrica – UK.



- As part of the EU funded Cornwall Local Energy Market (LEM) programme, the project will demonstrate how households can not only produce and store their own energy but also trade energy capacity to the wholesale energy market and provide flexibility to the local grid.
- sonnen was selected as the technology provider for the residential stream of around 700kWh of battery capacity across 100 homes.



European Union
European Regional
Development Fund

The sonnenCharger.

- Innovative charging station facilitates the intelligent and clean charging of all electric cars on the market.
- Instead of using conventionally generated electricity, the Wallbox charges the electric car with solar or stored electricity directly from the sonnenBatterie.
- Additional electricity can be obtained via the sonnenCommunity. With the sonnenFlat, driving a car is practically free.
- With the sonnenFlat 8000, for example, 5,000 kWh are available free of charge for the household and 3,000 kWh for mobility. This corresponds to roughly 15,000 km and savings of around EUR 1,500 in fuel costs per year.
- Benefits for all: The smart charging mode prevents outages in the local grid due to the flexible, grid-conductive charging. For the first time, electric cars can become part of the sonnenCommunity and balance out fluctuations in the electricity grid with their batteries.





sonnen

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