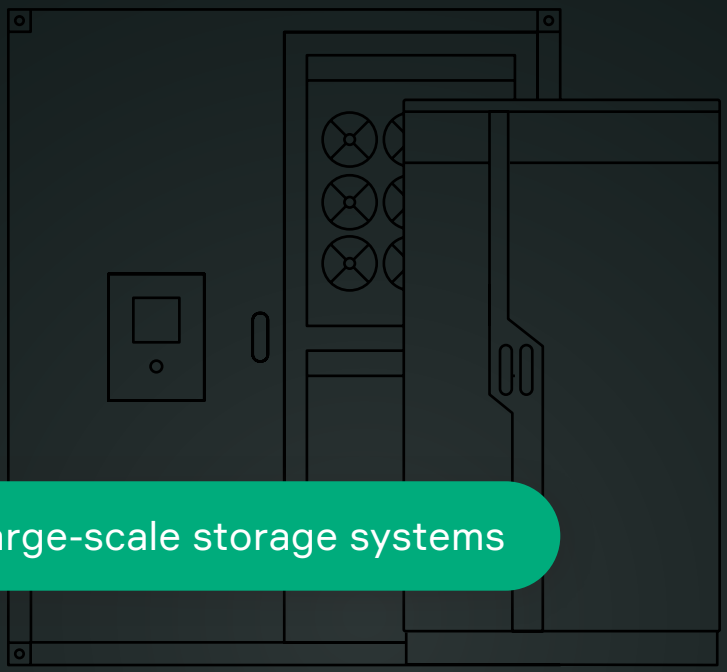
ads-tec-energy.com

adstec Energy



Scalable large-scale storage systems

Empowering your BESS Projects. Reliable, profitable & trusted since 2010.

EN

We Empower Your Business.

Renewable energies are gaining ground because they are more efficient, more economical and less dependent on global supply chains than fossil fuels. Wind and solar power are not stopgap solutions, they are the better choice. That said, electricity from these sources is only available when nature permits – and not necessarily when it is needed.

At the same time, demand for electricity is on the rise, with industrial plants, heat pumps, data centers and electromobility increasing the load, often in the form of peaks lasting just a few hours a day. If energy is not available when usage spikes, it does not fulfill its economic potential.
Intelligent storage systems are the only way to make full use of renewable energy. They absorb any excess and compensate for any shortfall – making renewables stable, not volatile.

Reliable, domestically produced energy offers more than an economic edge. It is the bedrock of a company's **operational autonomy**: for grid operators who have to guarantee a stable supply, for energy suppliers who need to plan ahead, and for countries that want to end their economical reliance on energy imports. So storage systems are not a nice-to-have; they are a must-have.

ADS-TEC Energy has been developing storage systems with proprietary software modules, power electronics and system integration **for 15 years**. With more than **120,000 battery modules in use**, we know what decades of reliable operation require – from technical, regulatory and day-to-day operational perspectives alike.

Our **Answer** to the **Challenges** of BESS Projects.

The potential of battery storage systems is well known. But there are other factors that decide whether a specific project is successful in the long run.

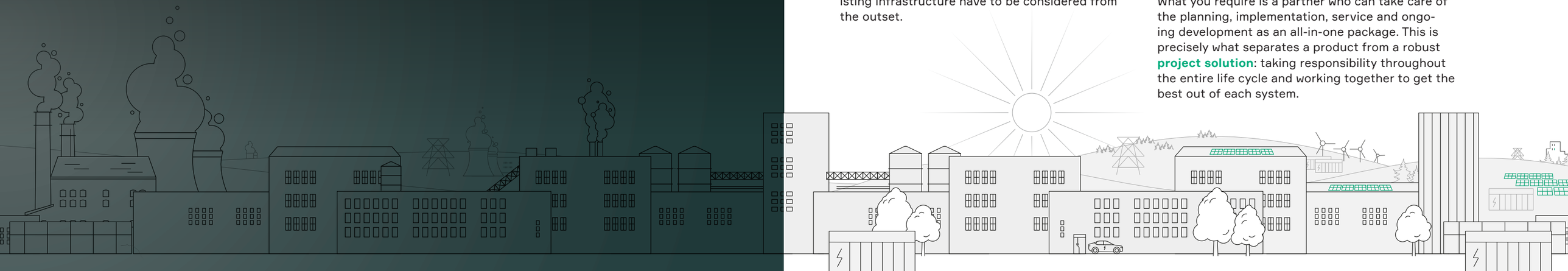
These days, storage projects have to do more than just provide energy. Secure integration, **high availability** and stable, economical operations over a multi-year period are what truly count. The hardware price is only one line item on the invoice, and it does not determine the TCO. A **reliable, economical overall system** can only happen when the battery, power electronics, energy management and interfaces work together seamlessly, the integration runs smoothly and the whole system lives up to the promises on the fact sheet.

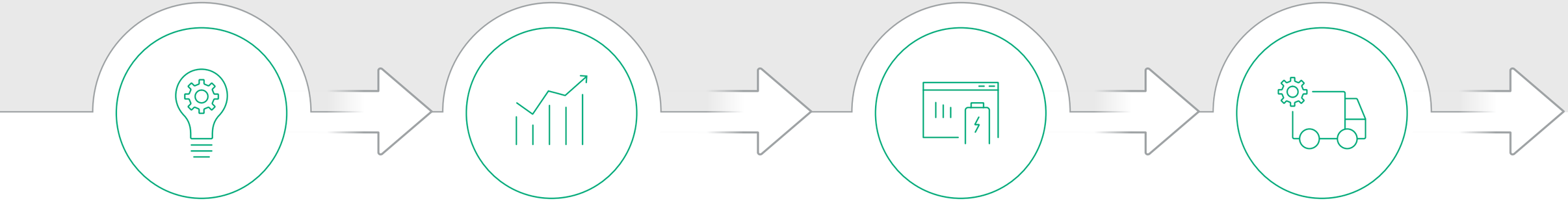
As complexity grows, so too the demands on operations and IT security. If you want to use storage systems successfully in the long term, you need data sovereignty and a solution that remains technically robust and operationally manageable over extended periods of time. Interfaces to network and control systems, trading platforms and pre-existing infrastructure have to be considered from the outset.

Typical concerns include uncertainty about long-term performance, dependence on individual components and software versions, and extensive outlay on integration, approvals and grid connection. There is often a lack of transparency around service, SLA and lifecycle costs, or excessive dependency on external service providers. We approach all of this with a genuine sense of overarching responsibility, a wealth of experience and extensive in-house expertise.

Why hardware alone isn't enough

Reliability and fast response times, as well as the availability of spare parts, are what matter over a system's entire service life. This is the only way to ensure that **costs are predictable** and systems remain efficient in the long term. Regulatory requirements change, markets evolve and operating models must remain adaptable. If you are planning a storage system that is intended to last for 15 to 20 years – and if you are thinking even longer term (repowering) – you need more than just technology. What you require is a partner who can take care of the planning, implementation, service and ongoing development as an all-in-one package. This is precisely what separates a product from a robust **project solution**: taking responsibility throughout the entire life cycle and working together to get the best out of each system.





Planning & installation
We support you from the initial idea to the installation of your project plans, whether you need a small smart grid or a multi-megawatt installation.

Operation
We also support you during ongoing operation and ensure that your system always runs reliably, economically and efficiently.

Monitoring
Intelligent monitoring gives you a sound overview of your storage system at all times. Software and remote maintenance are based on made in Germany solutions and ensure a high level of cybersecurity.

Service
Our service takes a long-term perspective, laying the foundations for economically viable use over 15 or even 20 years.

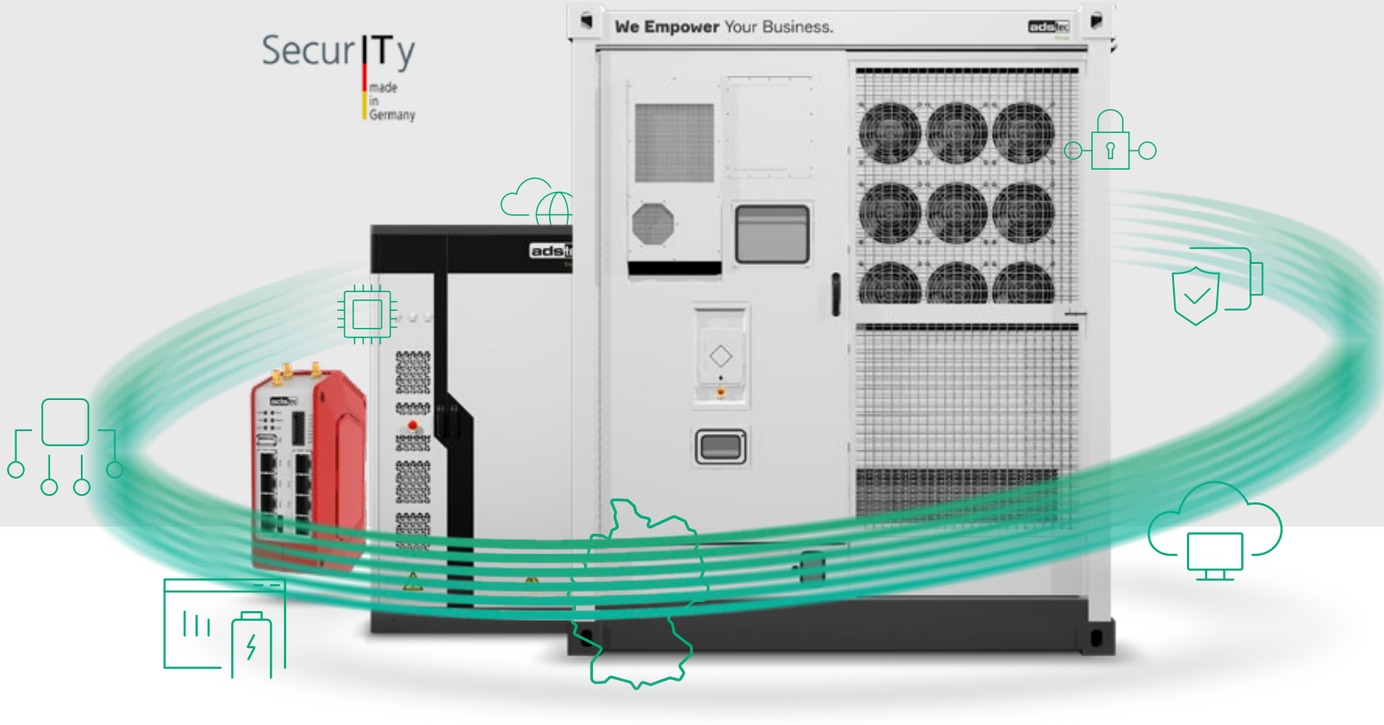
We're there by your Side – from the very first Plans all the Way to Operational Usage.

System expertise that goes beyond delivery
With almost **15 years' experience** in storage systems and more than 120,000 modules installed, ADS-TEC Energy sees the container solution as an overarching platform.
We provide the **system platform**: the battery system, power electronics, software, interfaces, service, cyber security and operational controllability. Based on this, operators, public utilities and marketing partners decide for themselves which market strategy to pursue. We have the expertise to understand every application – arbitrage, balancing energy or ancillary services – and provide individual support.

What we actually provide
Everything from project planning and system design through to commissioning, energy management and interfaces to pre-existing control systems and trading platforms. Along with long-term service, spare parts supply and **operational reliability** as the regulatory environment evolves – across the entire service life of the system.

Cybersecurity & monitoring

Security and Transparency Made in Germany.



Security and data sovereignty from a single source
The European Cyber Resilience Act came into force in 2024 and applies to all products that contain software with a data connection. Critical infrastructure is a relevant, and particularly important, aspect in this regard. For ADS-TEC Energy, operational autonomy is a top priority – and that also applies to the crucial area of IT security.

IT security made in Germany
For decades now, the ADS-TEC Group has been developing and producing its own hardware and software in various areas, including IT security. ADS-TEC Energy also uses this German-made technology in its products and services. Component development and certification according to IEC62443, as well as operation according to ISO27001, are vital in this regard.

Data collection, monitoring & remote management
ADS-TEC Energy always views the ecosystem as a whole. Data plays a key role here: secure data collection, remote management and data-based optimization open up unique opportunities for business models and economically viable operations. This is precisely the expertise and operational autonomy that have kept us going for enjoy years – and decades, always guided by our customers' requirements. Our total operational autonomy allows for adaptation to customer system interfaces, as well as hosting and secure management of customer applications in DOCKER containers on our platforms. This means you retain control of customer data and applications, without sacrificing the benefits of a full management and IT security suite.

Energy systems are complex digital platforms. Economical operations, efficient maintenance, and secure data and application management are key.

And this is where the broader picture comes into view: the components are just one part of the whole. ADS-TEC Energy offers customers and partners the secure digital infrastructure they need to manage the complexity of these systems in the long term and avoid risky dependencies. Made in Germany, with full operational autonomy.

Use cases

What makes our Storage Systems the right Choice?

Commercial & industrial (C&I)

Boost Profitability at your Site.

Battery storage systems for commercial and industrial applications facilitate flexible energy management, reduce electricity costs and enable more efficient use of internal generation systems.

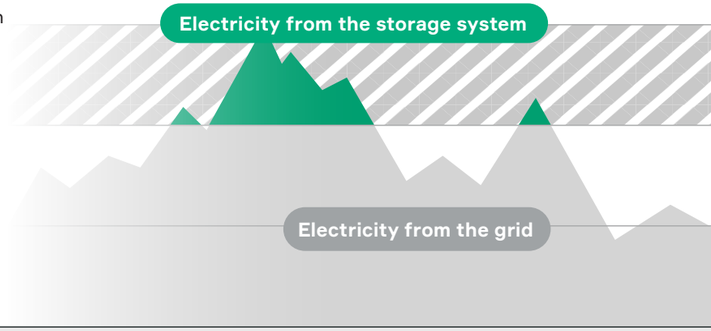
Peak shaving: targeted reduction of load costs
Battery storage systems provide energy to satisfy short-term spikes to prevent costly peak loads. Companies benefit from lower power prices and optimized electricity procurement.

Optimized self-consumption: more power from internal sources
Electricity from photovoltaic systems is stored temporarily and used when it is actually needed. This reduces the external electricity required, increases consumption of renewable energies consumed and eases the strain on electricity grids.

Energy trading: the financial benefit of flexibility
Storage capacity lets you drawn down electricity when the market is favorable and supply it at a more attractive price later on. The power is marketed automatically via connected trading systems, based on individually defined strategies and specifications.

Virtual grid connection expansion: quick, cost-efficient performance improvements
A battery storage system is a smart alternative to expensive grid expansion with new transformers, medium-voltage stations or cable routes – which often entail five- to six-figure costs and waiting times of months to years. As a virtual grid connection, a BESS increases the available power cost-effectively, without the need for lengthy grid expansion processes.

Ancillary services: unlock additional benefits
Battery storage systems offer rapid response times, which means they can carry out grid services and contribute to the stability of the energy system – particularly when multiple systems are used together. The integrated power electronics enable the provision of relevant grid services and open up additional economic potential.



↗ to large-scale storage systems

Utility scale

Monetize your Flexibility in the Energy Market.

Large-scale storage systems support the integration of renewable energies, stabilize the electricity system, and open up a variety of revenue sources through participation in the energy and flexibility markets.

Arbitrage: exploit volatility
The storage system charges when market prices are low or negative and discharges at higher prices when demand is up. The increasing volatility of the electricity system makes arbitrage transactions more financially attractive.

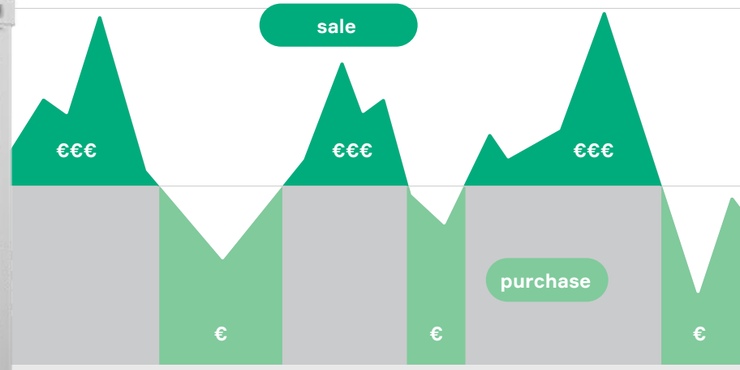
Balancing energy: ensure system stability
Power can from storage systems can help stabilize the electricity system – as a primary, secondary or tertiary reserve. The specific markets in question depend on system design, certification and strategy.

Flexibility marketing: make the most of short-term value
Exploit short-term flexibility via marketing partners or on intraday and flexibility markets directly.

Co-location: optimize existing systems
If compensation for your PV or wind installation is coming to an end, adding a battery storage system opens up new horizons. Electricity is stored and only fed back in at attractive prices, increasing revenues without state-determined compensation. The storage system can buffer peak loads, increase self-consumption or provide power for charging infrastructure.

Peak shaving & network optimization: reduce costs
The storage system smooths peak loads, which reduces grid charges and eases the strain on local grid infrastructure.

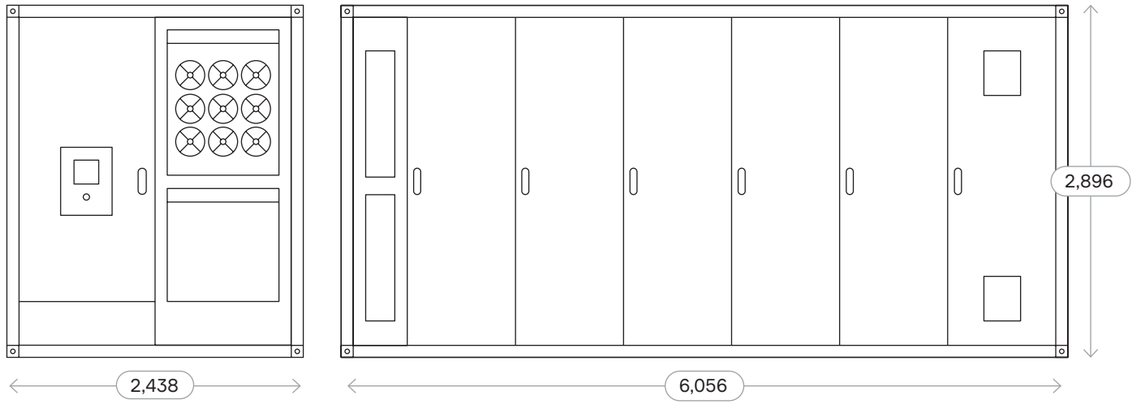
Multi-use: the economic lever
The true recipe for success is a combination of all of the above: arbitrage, balancing energy, flexibility marketing and grid optimization, all rolled into one. The ADS-TEC Energy platform ensures integrated controllability, clear interfaces and long-term operational reliability.



↗ to the Use-Cases

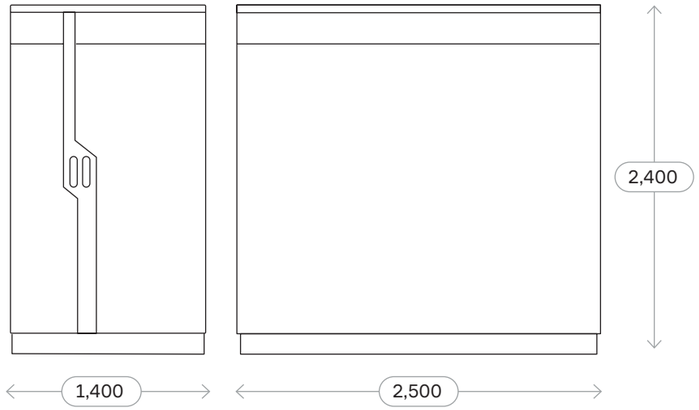
BESS 5000

Battery nominal capacity, nominal power	5,015 kWh, 2,500 kW
Voltage range	1,040–1,497.6 V
Cell chemistry	LFP
Battery strings	12 strings
Setup	Exterior
Operating temperature range	-20 °C to +45 °C
Dimensions L × W × H, weight	6,056 × 2,438 × 2,896 mm, 43 t
Air conditioning	Liquid cooling (integrated)
Max. installation height	2,000 m above sea level
Air humidity	≤ 95 % (non-condensing)
Protection class	IP55
Connection	ADS-TEC Energy Modbus TCP protocol
Certification	IEC62619, UN38.3, UL1973, UL9540A

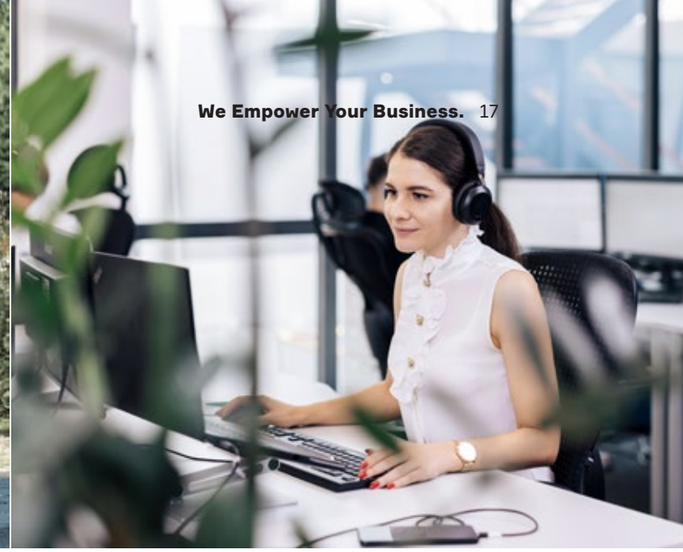


BESS 760

Battery nominal capacity, nominal power	760 kWh, 380 kW
Max. DC voltage	1,500 V
Cell chemistry	LFP
Battery strings	2 strings
Setup	Exterior
Operating temperature range	-20 °C to +45 °C
Dimensions L × W × H, weight	1,400 × 2,400 × 2,500 mm, max. 8 t
Air conditioning	Liquid cooling (integrated)
Max. installation height	2,000 m above sea level
Air humidity	≤ 95 % (non-condensing)
Protection class	IP55
Connection	ADS-TEC Energy Modbus TCP protocol
Certification	IEC62619, UN38.3, UL1973, UL9540A



Values in mm



ADS-TEC Energy ServiceCrew

Maximum availability. Minimum effort.

Our service team supports you with any issue you have with your ADS-TEC Energy charging and storage solutions. We are your reliable partner throughout the entire product life cycle, supporting you from installation to component modification. Our comprehensive service portfolio high economic availability of your devices. Our skilled, experienced service team are customer-focused and goal-oriented, so you can give your full attention to your core business.

↗ visit our ServiceCrew

Remote service
We use remote diagnostics to get your system running again in real time.

Maintenance
Our trained service staff and our service providers are available on site to provide optimal support for your system.

Spare parts
ADS-TEC Energy has a reliable supply of all spare parts and wear parts for your devices and we can get them to you quickly.

Training
We empower your team to resolve faults independently to maximize the availability of your systems.

Flexible SLAs
Our tailor-made service agreements ensure stable operations.

Turnkey solutions
Our BESS solutions offer maximum flexibility, security and availability. Our first systems are still in operation today, after more than 10 years.

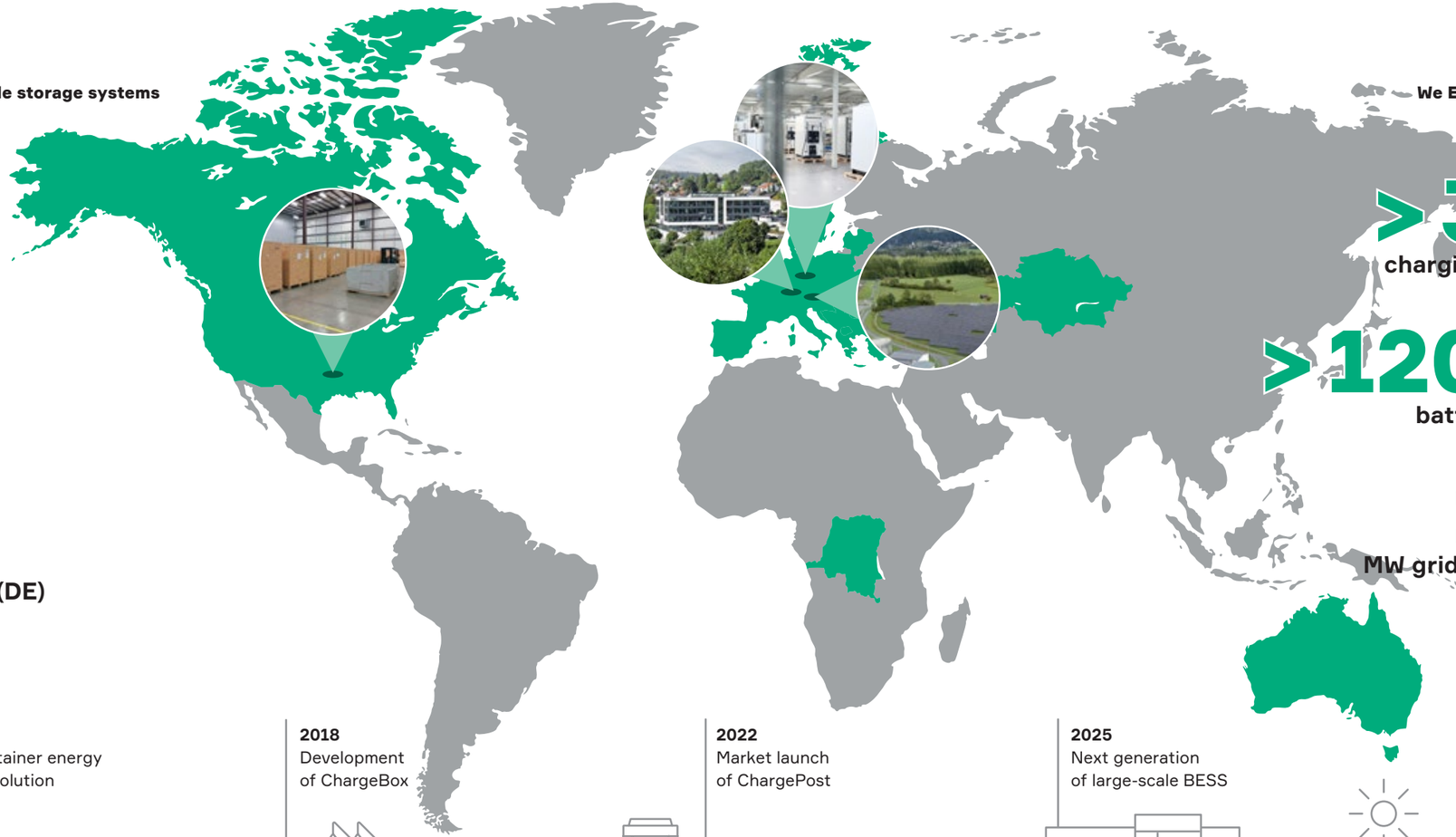
ServiceCrew

Awards

DBU | Deutscher Umweltpreis

300
employees

4 locations
Nürtingen & Klipphausen (DE)
Kötschach-Mauthen (AT)
Auburn, AL (USA)



> 3,700
charging points delivered

> 120,000
battery modules in use

> 250
MW grid expansion avoided

2007
First battery pack developed in-house

2012
First container energy storage solution

2015
First unsubsidized large-scale BESS

2018
Development of ChargeBox

2021
NASDAQ listing

2022
Market launch of ChargePost

2024
Sweden's largest battery storage system

2025
Next generation of large-scale BESS

2026
ADS-TEC Energy is developing one of the **largest battery storage system projects in Europe** (1 GW/4 GWh), designed for use in all relevant energy markets.

Renewable energies are volatile. Their generation is not always synchronized with the current energy demand in terms of time and location. This is why ***storage systems are the twin of renewables****. Without intelligent storage systems, there will be no further integration of renewable energy sources.“*

Thomas Speidel,
Founder and CEO ads-tec Energy GmbH & President of BVES

adstec
Energy

ads-tec-energy.com