

Electrical Energy Storage Report Europe

(Subscription Model)

EUPD Research | June 2024



22+
YEARS
EUPD Research

BACKGROUND

Electrical energy storage has become an **integral part of the energy transition**, and a vital component of a complete renewable energy system

As many European markets have set ambitious PV targets with a high percentage of larger residential and rooftop systems, as self-consumption is becoming prevalent across Europe, and as more grid flexibility and security will be needed, the storage market is bound to boost in the coming years

While Germany and Italy remain by the most important European markets for residential storage systems, **more markets** are joining the ranks. The timely data-based identification of these newly emerging storage markets will be crucial in guaranteeing a better future success

Furthermore, **the storage industry has been growing** as further players have been pushing into the market; more and more renowned module manufacturers have introduced their own storage solutions, the electric mobility sector is keeping a close eye on the developments in terms of sector coupling, and large utilities and multinational corporations have been increasing their investments in solar PV and storage

To be successful in the storage industry it is **vital to keep track of the current developments**, among others the growing PV markets, the individual regulatory framework conditions in the European countries, and the competitive landscape in terms of brands and manufacturers

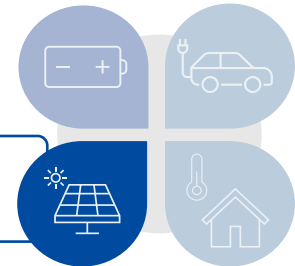
The **Electrical Energy Storage Report Europe** offer you all the above on a half-yearly basis, in order for you to keep a close eye on the developments you can react as quickly as possible, and secure your success in the energy storage industry

Electrical Energy Storage Report Europe

In addition to various surveys, EUPD Research offers a report on residential storage in the major European markets

Electrical Energy Storage Report Europe

Market intelligence and data analytics report to gain insights into the major European storage markets



Market data

Residential storage installations (Numbers)

Residential storage installations (MWh)

Residential PV installations

Emerging Markets

Intelligence & Analytics

Framework conditions

Drivers & barriers

Top Storage Market Players

Forecast

The Electrical Energy Storage Report Europe contains:

Key Indicators

An overview of residential PV and storage installations, as well as forecasts for both in key European markets

Framework Conditions

An overview of governmental framework conditions per country, as well as drivers and barriers and the resulting impact

Top Storage Market Players (Germany & Europe)

Market shares for residential storage suppliers (based on delivered and installed systems)



Number of residential storage installations – 2024



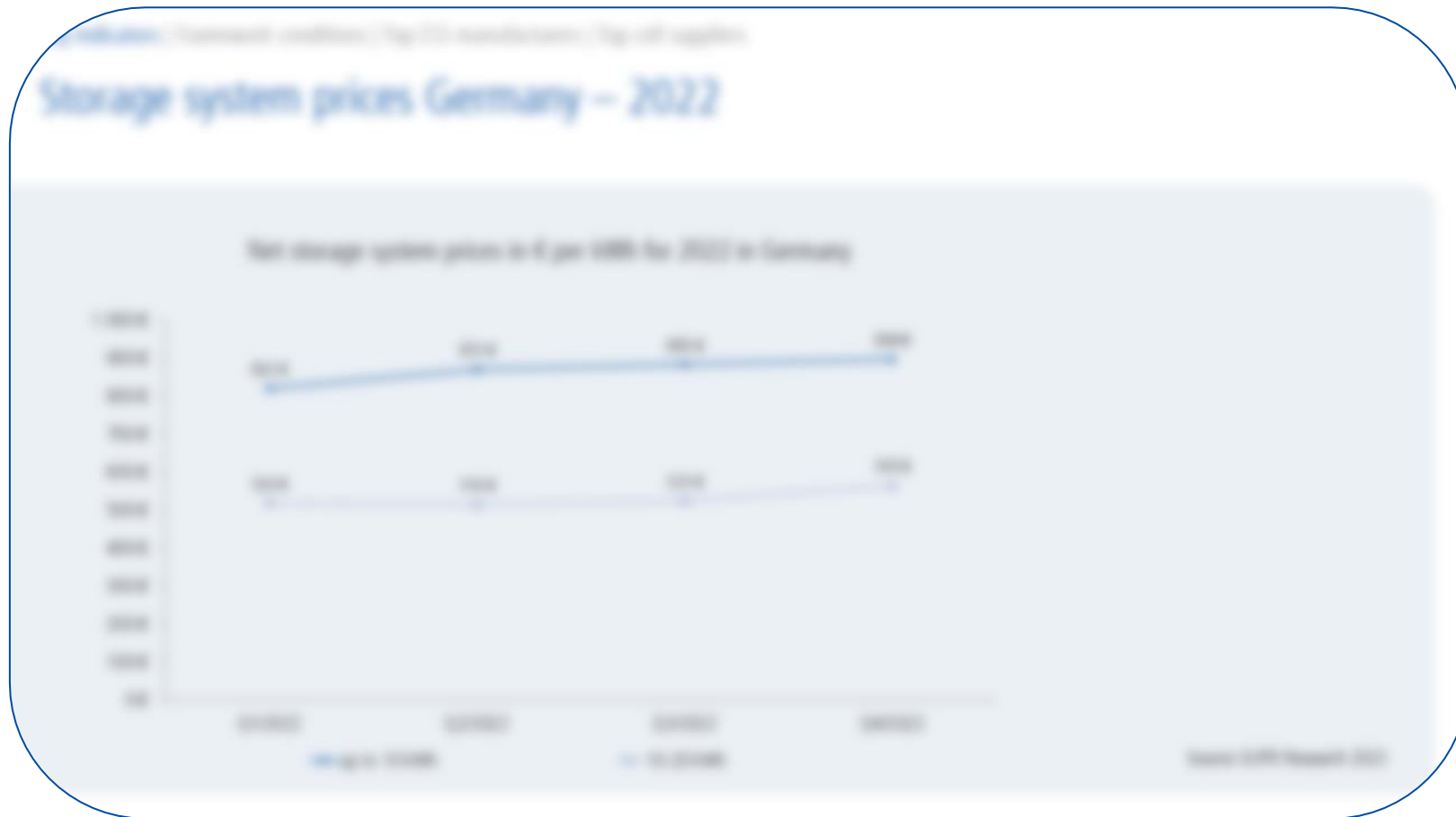
The residential storage market in Europe reached new heights in 2023, with close to 800 thousand newly installed systems in only the top two BESS markets Germany and Italy with the rest of the European markets also increasing their BESS deployment. This development is analogous to the developments in the rooftop PV market, and shows similar potential in terms of forecasts for 2024 and beyond

However, the different markets are all structured differently, and in order to be successful one needs to understand the drivers and barriers

Source: EUPD Research 2024

NEW: Storage system prices

In addition to various market information, in the 1st half of 2024 storage system prices for Germany will be added to this report



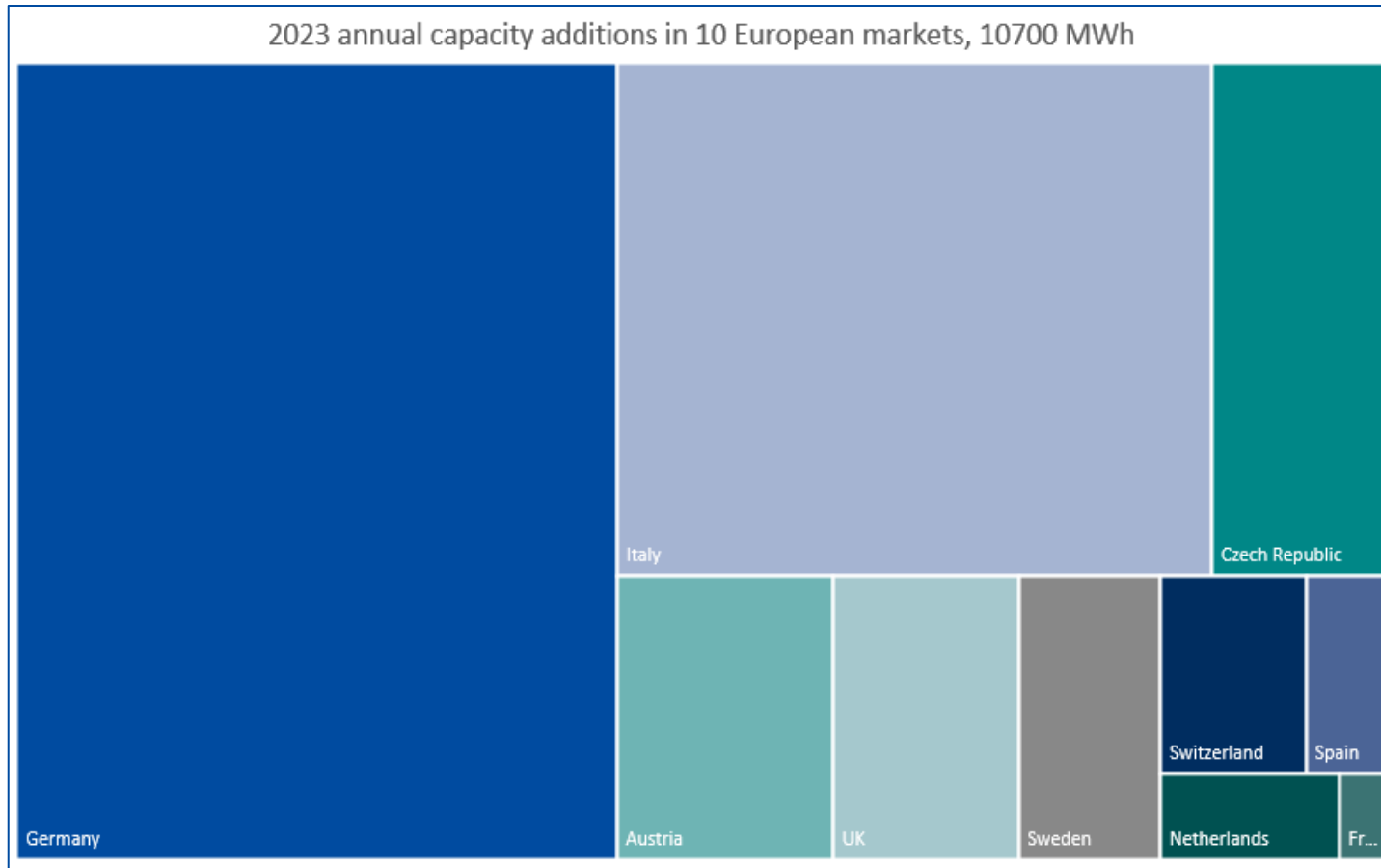
Every quarter, EUPD Research surveys 100 installers in Germany on prices for PV modules, PV systems and storage systems

This price analysis will be part of the Electrical Energy Storage Report Europe

Source: EUPD Research 2023

Scope

The countries within the scope have been constantly growing and show further potential



- Key PV markets in Europe have made impressive progress in the development of residential storage systems
- EUPD Research will further provide market information for the mentioned countries, such as market statistics, regulatory framework, as well as drivers and barriers
- The two emerging markets added to the H1-2024 report are **Czech Republic** and **Sweden**

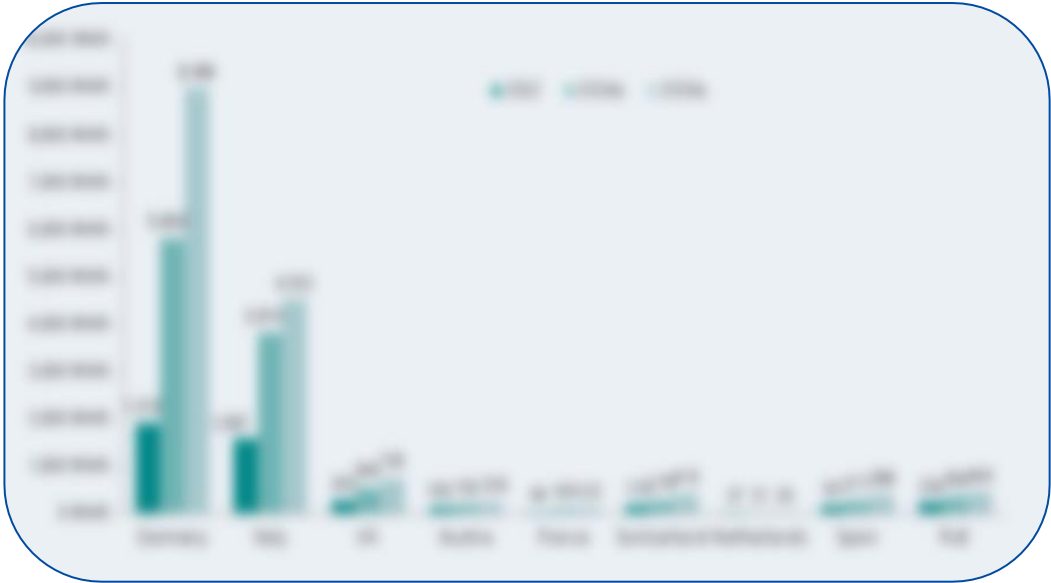
Key Indicators

This section allows you to track and estimate the developments in the residential segment in the key European PV and storage markets: Germany, Italy, Czech Republic, Austria, UK, Sweden, France, Switzerland, the Netherlands, Spain and Rest of Europe
Here you will receive historical data, current figures and forecasts in terms of numbers and capacity

Installed Capacity of ESS installations | EU | Segment ≤ 20 kWh | 2024e



Installed Capacity of ESS installations | EU | Segment ≤ 20 kWh | 2023-2027e



Framework Conditions

This section highlights all framework conditions, as well as drivers & barriers for the residential BESS market

They are displayed for every featured country, in order to better understand the development in terms of storage installations

[Key indicators](#) | [Framework condition](#) | [Top ESS manufacturers](#) | [To cell suppliers](#)

Framework conditions and drivers & barriers – Introduction

In the following chapter the framework conditions, as well as drivers & barriers for the residential ESS market, are displayed for each country, in order to better understand the development in terms of storage installations

Here are the factors influencing European markets in general, encompassing both drivers and barriers, without specific focus on any individual country

DRIVERS

- High climate targets in the European Union
- Increasing electricity requirement due to new technologies powered by electricity (e.g. electric cars, heat pumps)
- Self consumption incentives are increasing in various markets while tariffs of grid injection incentives are reducing gradually
- Storage system coupling

Barriers

- Manufacturing related issues such as rare resources and environmental footprint
- Supply chain bottlenecks and scarcity of raw materials
- Less financial freedom negatively impacts the return on investment
- Lack of awareness regarding the benefits of storage

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[Key indicators](#) | [Framework condition](#) | [Top ESS manufacturers](#) | [To cell suppliers](#)

Austria – Framework conditions I/II

Residential PV:

- In 2023, the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology allocated approximately 600 million euros for the installation of new photovoltaic systems
- The introduction of the Renewable Energy Expansion Law (EAG) enables the government to offer investment grants for PV systems up to 1 MWp
- PV systems with a capacity of up to 10 kWp receive a subsidy of 285 EUR/kWp, while systems up to 20 kWp are subsidized with 250 EUR/kWp
- In addition, some federal states have their own subsidy schemes
- Austria aims to reach a PV target of 13 GW by 2030

Residential ESS:

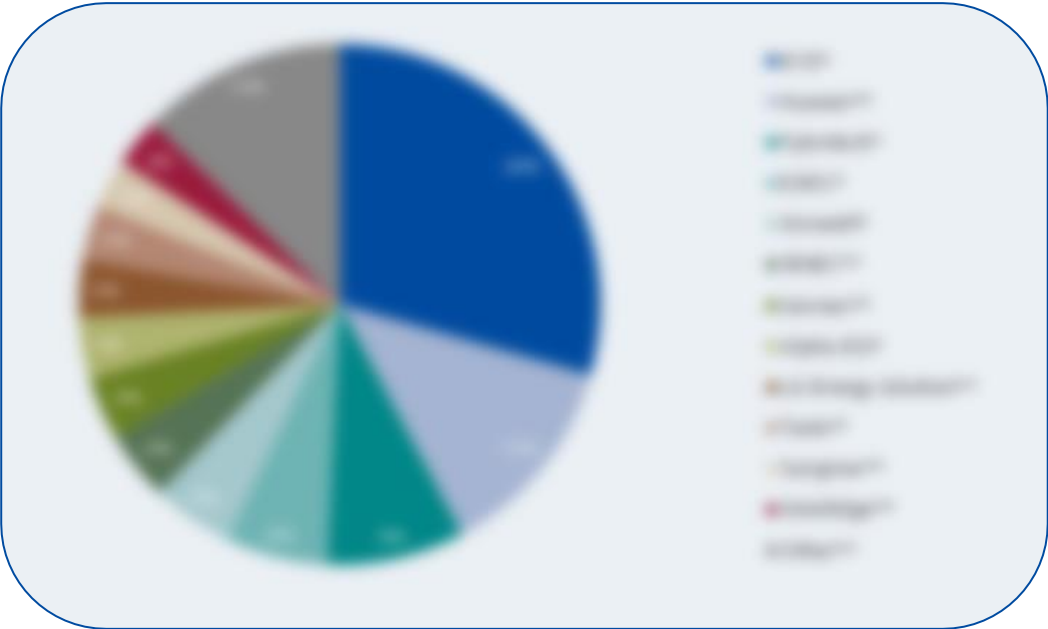
- At the federal level, there is an investment grant for new storage systems up to 50 kWh, mirroring the support provided by the Renewable Energy Expansion Law (EAG)
- Additionally, there is an investment grant for retrofit-storage installations with a budget of 15 million euros, which will be continued and expanded in 2023
- Several support schemes on state level

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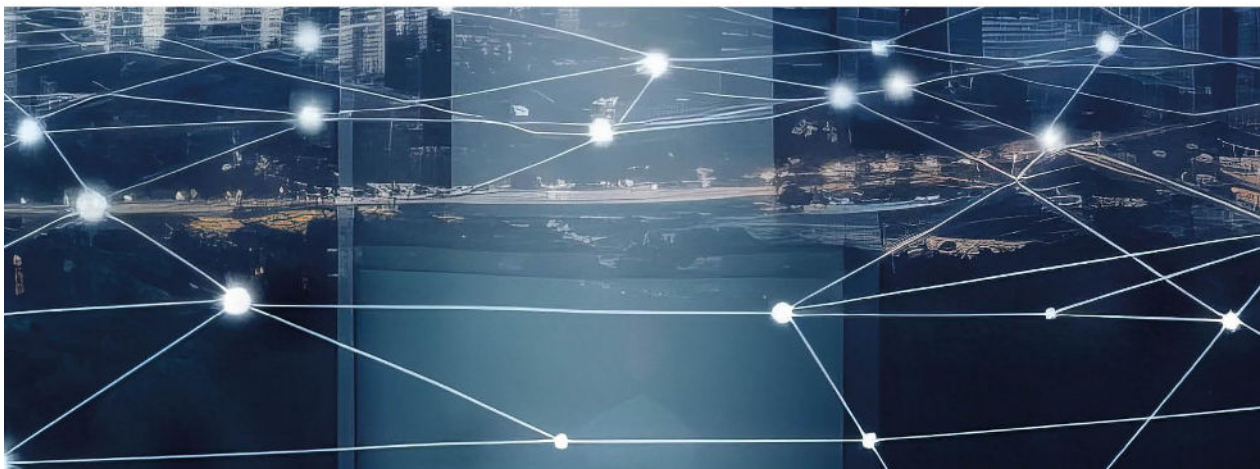
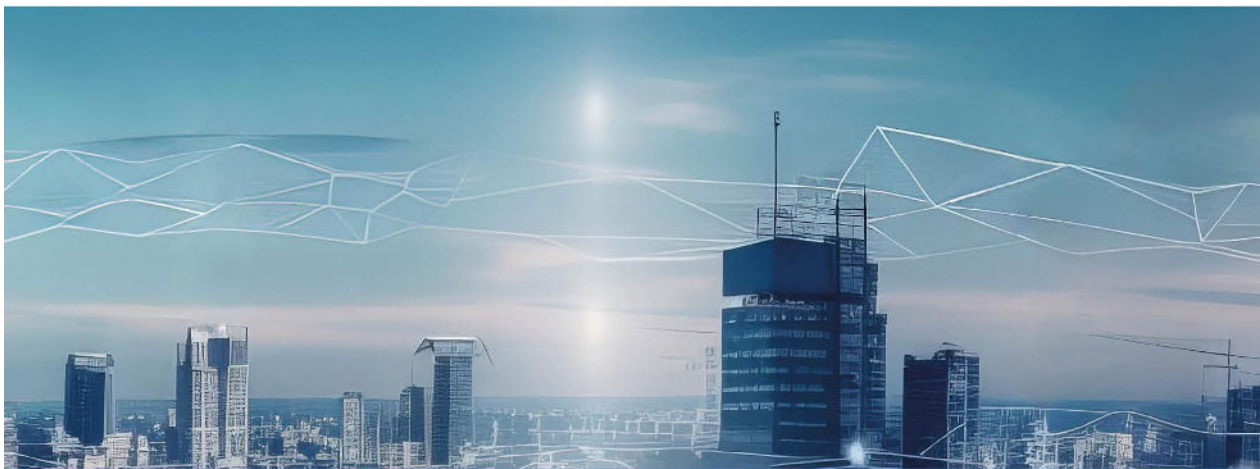
Top Storage Market Players (Germany & Europe)

In this chapter the market shares for residential storage suppliers are depicted for Germany and Europe. The shares reflect the delivered and installed systems; the market share calculation is based on a survey with manufacturers, plus a further benchmarking with EUPD Research study reports and desk research

Storage suppliers market shares related to the installed storage capacity | Europe | 2023e



ORDER FORM



Order Confirmation

We hereby order the following:

Subscription Electrical Energy Storage Reports Europe

	Price*
<input type="checkbox"/> One-Year Subscription: two half-yearly reports	12,800 €
<input type="checkbox"/> Two-Year Subscription: four half-yearly reports	19,600 €
<input type="checkbox"/> Three-Year Subscription: six half-yearly reports	23,400 €

*all prices excl. VAT & travel expenses

Payment conditions: 100% upon order

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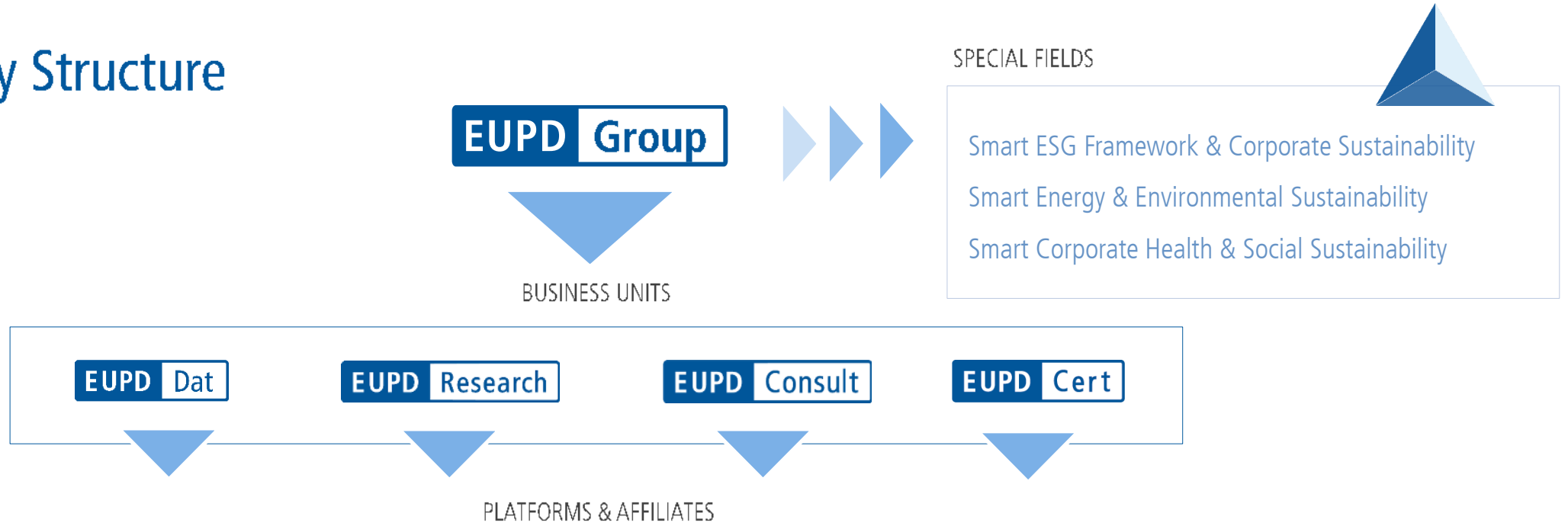
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Company Structure



EUPD Energy Portfolio

EUPD Research

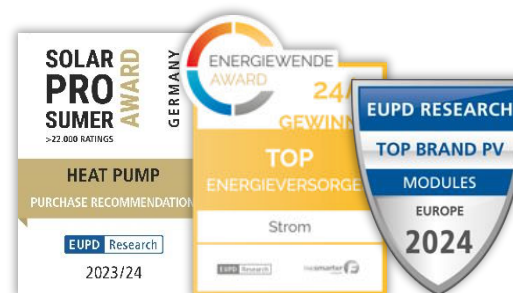
Reports

- [Global Energy Transition GET-MATRIX[©]](#)
- [Electrical Energy Storage Report Europe[©]](#)
- [PV InstallerMonitor[©] | EES InstallerMonitor[©]](#)
- [EV Charging Stations InstallerMonitor[©]](#)
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- [PV Price & Inventory Tracker[©] | EES Price & Inventory Tracker[©]](#)
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- [Market Leadership Study: The United States[©]](#)
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EUPD Cert

Certification

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- [Top Brand PV - EPC & Project Developers](#)
- [Top Brand PV Installer Award](#)
- [Top Innovation Award](#)
- [Customer Satisfaction Seal](#)
- [Energy Transition Award](#)
- [SolarProsumerAward](#)



EUPD Consult

Exclusive Consulting

- Within the scope of strategic consulting projects, we focus on the review, further development or redevelopment of the company's orientation, we rethink concepts, measures or the positioning within the competitive environment and shape growth paths and business models
- Our future-oriented consulting services analyze both the corporate environment and the fundamental objectives of the client

EUPD Research | References (Extract)

AEG

APsystems
ALTERNATIVE ENERGY POWER

DAI Solar

e.on

DMEGC
S O L A R

SMA

houmiles

ENERGY STORAGE
E3 DC

AIKO

IBC
S O L A R

Vaillant

Jinko Solar
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SUNTECH

qcells

Trina solar

ENPHASE

LONGI

SHARP

KOSTAL

VARTA

Enpal.

BayWa re.
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EUPD Research | General Terms and Conditions of Business I

1. Scope

1.1 All contracts between EUPD Research Sustainable Management GmbH (hereafter EUPD GmbH) - and the customer shall be subject to the following terms and conditions only. The customer's terms and conditions of business shall not be applicable and shall not put EUPD GmbH under any obligation to comply unless EUPD GmbH explicitly gives written acknowledgment and acceptance of such conditions.

1.2 Offers are aimed exclusively at commercial clients, that is, companies according to Article 14 BGB (German Civil Code). Private customers, that is, customers according to Article 13 BGB, are not permitted to place legally binding orders based on the aforementioned. Interested private customers should contact EUPD GmbH by telephone for information on how to place a non-commercial order. Furthermore, the legal right to return items as stated in consumer protection law does not apply to orders placed by commercial clients but does apply to orders placed by private customers.

2. Offer and Ordering Process

2.1 The presentation of the products together with the order form does not constitute a legally binding offer. Offers are subject to the written confirmation of EUPD GmbH. They are designated for the internal use of the customer only.

2.2 The purchaser places a binding offer for the product of choice when all relevant purchase details have been given and the general terms and conditions of business accepted. This will be confirmed immediately by email or fax sent to the address given by the customer. The contract to purchase between the purchaser and EUPD GmbH is valid from when the order is confirmed, or, the products are delivered either by mail or download.

3. Scope of Services, Remuneration and Prices

3.1 Services offered include but are not limited to the following:

a. Multi-Client-Services: client-independent studies for an indefinite number of customers.

b. Shared-Services: commissioned study on behalf of a limited number of customers for the exclusive purchase of those customers.

c. Exclusive-Services: assignments carried out on behalf of a single customer who will have the exclusive license to use the product but only for an individually negotiated period of time. This exclusive license will be for a period no longer than 12 months. After a period of no longer than 12 months it will become a non-exclusive license.

3.2 The prices are net prices in Euros. They do not include sales tax/VAT or delivery costs. Sales tax/VAT will be added to the net costs according to the legally defined percentage. The prices valid at the time of ordering are binding.

3.3 Travel expenses incurred for EUPD GmbH workshops either provided in combination with studies or booked separately are not included in the scope of the offer. Prices have to be paid separately by the customer. This does not apply if it is explicitly agreed that the workshop or the resulting travel expenses for the workshop are part of the negotiated contract and thus do not have to be paid separately.

3.4 Should circumstances arise beyond the control of EUPD GmbH which impose a temporary hindrance on the provision of services, then services and delivery appointments agreed on will be extended. Customers will be informed of any such event or other delay immediately

4. Terms of Payment and Delivery

4.1 Payment is to be made to the amount and method stated in the contract. Any addition and/ or aberration require the written confirmation of EUPD GmbH in order to be effective

4.2 Payment is generally to be made upon receipt of invoice. The products will be shipped as soon as full payment has been made to the account of EUPD GmbH. The terms and conditions for payment and delivery of Shared-Services and Exclusive-Services are stipulated in the binding offer.

4.3 Delivery costs depend on the quantity of products ordered, their destination as well as type of delivery. There are no delivery costs for products which can be downloaded. The customer accepts that any fees or charges owed for customs or non-EU addresses will not be paid by EUPD GmbH nor is EUPD GmbH liable for them.

4.4 The method of delivery, route and company employed to deliver will be chosen by EUPD GmbH at their sole discretion. Once the purchaser has taken delivery of the item from the delivery service, the purchaser is responsible for the item. The company responsible for delivery is to be made aware of any damage sustained in transit immediately. These damages are also to be reported to EUPD GmbH immediately. Part deliveries are permissible where appropriate.

EUPD Research | General Terms and Conditions of Business II

4.5 EUPD GmbH retains ownership of all goods and all licensing rights pertaining to the usage of data files as well as intellectual property until payment of invoice has been made in full. Intellectual property rights are lawfully retained by the author.

4.6 The purchaser is only able to offset counter claims if they are acknowledged by law, uncontested, or prior written consent has been granted by EUPD GmbH. Customers are only have the right of retention if counterclaims are based on the same contractual relationship. The customer is prohibited from transferring any claims of payment against EUPD GmbH to a third party.

4.7 The estimated costs for the services provided by EUPD GmbH are based on project calculations and experience. Estimations are optimized and customer-oriented so that lower deviations may not be assumed.

However, it cannot be fully excluded that additional effort maybe required in the completion phase of the project. Should the suggested amount be exceeded, EUPD GmbH will inform the client promptly. Such additional efforts will be calculated on the basis of man-day costs and these may vary according to the qualification of the staff involved.

Upon notification of these additional costs the client may choose whether the project shall continue in accordance with the original cost estimation as stated in the proposal although full completion of the project may no longer be possible or agree to the revised cost estimation thus enabling full completion of the project. Should the client agree to the latter, this shall be subject to a separate written agreement.

5. Contract Period and Termination

The contract is entered into upon signature and has a one-year validity. At the end of the initial term, this agreement shall automatically renew for successive one-year periods unless terminated by the client with three months prior notice.

6. Copyright and Licenses

6.1 The products and their intellectual property are protected by copyright. It is only possible to purchase a license to use the product and not the product itself or its content. The author/ creator remains the owner of intellectual property.

6.2 The customer is granted a non-transferable and non-exclusive license to use the product and the results and content in the product (with the exception of Exclusive-Services) for personal use only. As far as the customer (for example an agency) exclusively acts as the purchaser for a user mentioned by name within the order, then the right of use applies solely for said user.

6.3 Permission to use the licensed product in the national and international affiliates of the company is subject to the written approval of EUPD GmbH.

6.4 Any use of the product not explicitly permitted under copyright law is prohibited without the prior written consent of EUPD GmbH as the licensor and/or the written consent of the author. This includes but is not limited to copying, distributing, publishing, translating, saving, processing and reproducing the work in databases. Non-compliance will be prosecuted

7. Liability

7.1 The products were prepared with the utmost care, using professional methodologies and taking relevant legislation into account with the aim of assuring the best possible accuracy of the studies and their results. The data contained in this product is based on surveys of sample populations, conducted using standard statistical methods to the best of our knowledge. As such the study is subject to a certain statistical error rate and is based exclusively on the facts which were available at the time of the survey. Due to the aforementioned, no guarantee can be given for the accuracy and completeness of the studies and the data made available in them.

7.2 The studies contain specific information, but explicitly do not contain any definite recommendations on investments or actions to be taken. Should the user, having taken the above mentioned into consideration, choose to use the studies to support their decision making process, EUPD GmbH shall not assume liability for the economic success of such investments or actions.

8. Jurisdiction

The court of jurisdiction is Bonn. German law will be applied in all legal proceedings.

9. Severability Clause

Should any of these terms and conditions, either in full or in part, be invalid or incomplete, it shall not affect the validity of the other terms and conditions. In that case, the terms and conditions, as stated in German law come into effect.

As of October 2022