

GERMAN ENERGY STORAGE POLICY



Does Germany need energy storage systems? While around 254 terawatt-hours (TWh) of electricity were generated from renewable energy in Germany in 2022, 600 TWh of electricity are expected to come from renewable sources by 2030. Germany is particularly dependent on a market ramp-up of energy storage systems, especially battery storage systems. What role do energy storage systems play?



Should energy storage systems be included in Germany's power plant strategy? The power plant strategy for hydrogen-capable power plants recently presented by the German government also emphasises that storage systems should be included. Exemption from grid charges The BMWK's comments express sympathy for the continuation of the current grid fee exemptions for energy storage systems.



Are electricity storage facilities legal in Germany? There is no separate legislation on electricity storage facilities in Germany. German law regards electricity storage facilities as consumers of electricity.



How secure is Germany's energy supply? In its energy transition so far, Germany has maintained a high degree of oil, natural gas and electricity supply security.



What is the energy storage strategy? The strategy paper provides an overview of the measures and challenges involved in establishing energy storage systems. The energy storage strategy aims to promote the expansion and integration of energy storage systems and thus support the energy transition. By 2035, the energy sector in Germany should be largely free of greenhouse gas emissions.

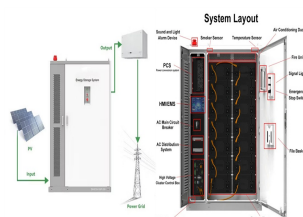
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How do storage systems work in Germany? Most storage systems in Germany are currently used together with residential PV plants to increase self-consumption and reduce costs. Inexpensive storage systems can be built using Second-Life-Batteries (Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen, 2020).



The EEG 2023 is the biggest amendment to energy legislation in decades. It lays the foundations for Germany to become climate neutral. Planning provides for consistent and much faster expansion in



Energy storage systems will play a fundamental role in integrating renewable energy into the energy infrastructure and help maintain grid security by compensating for the enormous increase of fluctuating renewable energies. Germany's geographical makeup places significant restrictions on the possibility of developing new pumped storage capacity.



The authors define HSS as those under 30kWh, and Germany now has 430,000 total installations after 145,000 totalling 739MW/1,268MWh were installed last year. Its figures roughly match up with research by Energie Consulting commissioned by the Germany energy storage association (BVES), which pegged the 2020-year end figure at over 300,000.



The German Federal Energy Industry Act (EnWG) exempts storage facilities which were built after 31 December 2008 and were put into operation within 15 years on or after 4 August 2011 from ???



Energy storage can future-proof the German energy system. Fluence is committed to supporting the energy transition in Germany and advocating for the policy framework that ensures investment security for storage developers and investors. After all, this is how we can transform the way

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we power our world ??? in Germany and globally.

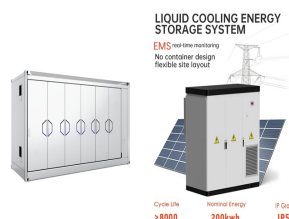
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ESS policies mostly promote energy storage by providing incentives, soft loans, targets and a level playing field. Nevertheless, a relatively small number of countries around the world have implemented the ESS policies. It is hoped that other countries especially in the emerging economies will learn from their experiences and adopt the policies



General policy objectives for energy security are provided by the German draft plan and could be further substantiated by specific policies and measures. Specific objectives such as for demand response and energy storage could be set out in the final plan which could also include information on the phase out from nuclear.



German energy storage trade body the BVES has echoed calls to prevent the collapse of Germany's governing coalition, on Nov. 6, 2024, from resulting in a political deadlock that will delay or derail climate-related policy.



Germany's renewable energy levy, the surcharge in consumers' electricity bills that goes to support renewables, will be EUR 0.065 (USD 0.077) per kWh next year, reduced from EUR 0.06756 in 2020. Average households will see power prices fall by 1%.



On 5 July 2024, the German government published important key points regarding the power plant strategy, including the expansion of long-duration energy storage facilities to the tune of 0.5 GW to support gas-fired power plants. This is intended to stabilize the energy grid during periods of low sun and wind and to ensure security of supply.



The German government has opened a public consultation on new frameworks to procure energy resources, including long-duration energy storage (LDES). Under the proposed Kraftwerkssicherheitsgesetz, loosely translated as the Power Plant Safety Act, the Ministry for the Economy

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and Climate Change (BMWK) would seek resources, including 12.5GW of

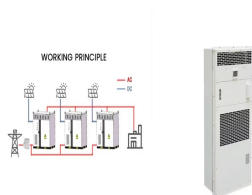
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The German government aims to achieve greenhouse gas neutrality by 2045. To reach this goal, renewable energy is expanded throughout the country the end of 2020, 46% of the electricity mix have already been produced from wind and hydropower, photovoltaics, and biomass. By 2030, this number is planned to increase to 50% and by 2050 at least 80% of energy is ???



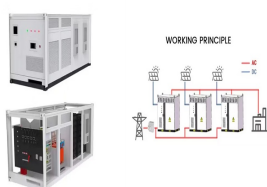
Seed and Greet EV charge station, one of just two projects in Germany featuring large-scale BESS at an EV charging facility. Image: Tesvolt. Germany's installed based of large-scale energy storage facilities is predicted to roughly double in the next couple of years, after 2022 saw a comeback for the segment.



The Renewable Energy Directive, revised last year, is based on the EU's goal of increasing the share of renewable energy sources in gross final energy consumption to at least 42.5% in the EU.

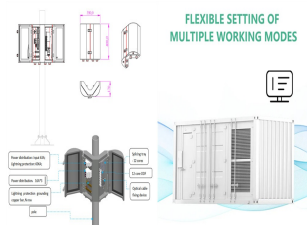


Below, we provide an overview of some of the issues that should be considered by those interested in investing in the energy storage sector in Germany. Energy law and regulation. The field of energy storage and electricity storage is notable for the lack of a consistent legal framework in terms of energy law and regulation.



The German Energiewende (energy transition) started with price guarantees for avoidance activities and later turned to premiums and tenders. Dynamic efficiency was a core concept of this environmental policy. Out of multiple technologies wind and solar power???which were considered too expensive at the time???turned out to be cheaper than the use of oil, coal, gas or nuclear ???

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Developer Kyon Energy has claimed the largest approved BESS in Europe for a 275MWh project in Germany, just as regulators extend grid fee exemptions for energy storage by three years to 2029. Kyon has received approval for a 137.5MW/275MWh battery energy storage system (BESS) project in Germany, it said today (13 November).



On 8 December 2023, the Federal Ministry for Economic Affairs and Climate Protection (BMWK) published the electricity storage strategy. The aim of the strategy is to contribute to a "virtually climate-neutral" electricity supply in 2035. Due to the volatility of renewable energies, electricity storage systems play an important role in stabilising and ???



Since the 2013 International Energy Agency (IEA) review of German energy policies, the Energiewende continues to be the defining feature of Germany's energy policy landscape. In place for nearly a decade, the Energiewende is a major plan for transforming the German energy system into a more efficient one supplied mainly by renewable energy



5 The Role of Electricity Storage in the German Energy Transition and Policy Support to Energy Storage in Germany 36 6 Norms for Electricity Storage in Germany 39 Energy Storage in Germany Present Developments and Applicability in China 9 2 Introduction: Energy Storage in Germany The strong expansion of renewable energy sources (RES)



The proposed energy storage policies offer positive return on investment of 40% when pairing a battery with solar PV, without the need for central coordination of decentralized energy storage nor providing ancillary services by electricity storage in buildings. Stakeholder demands and regulatory framework for community energy storage with a



Amid the global boom of the battery storage market Germany is one of the leading countries for energy storage installation. Industry data shows installed capacity of residential battery energy storage in Germany totalled 1.2GW/1.9GWh in 2022, a year-on-year increase of 52%, while the

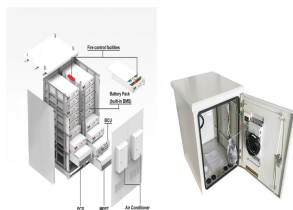
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installed capacity of front-of-the-meter energy storage (FTM) large-scale
energy storage ???

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Germany's Association of Energy Storage Systems explicitly welcomes the storage strategy now presented by the Ministry of Economic Affairs and Climate Action (BMWK). The strategy aims ???



The German parliament has passed law amendments giving energy storage its own legal definition, in a move welcomed by industry sources. Adjustments have been made to the law on the Federal Requirements Plan (BBPIG), Energy Industry Act (EnWG) and Grid Expansion Acceleration Act (NABEG) which now define energy storage as an asset where ???



The demand for corresponding technologies for electrical energy storage will therefore increase exponentially. A sustainable circular economy, as addressed by the European Battery Regulation, will also be necessary in order to achieve the goals that have been set. Transformation of Germany's energy system in the context of the EU Green



The federal government's energy plan (the Energiekonzept 2050) sets the stage for a sea change in our energy supply. It is crucial that electrical devices, as well as buildings and transportation become considerably more efficient. Energy is increasingly being derived from renewable sources. In order for this change to come about, our energy supply needs to ???



proposals for facilitating the use of storage systems in the energy system. This storage strategy finally provides an opportunity to bring German regulation into line with EU requirements, to streamline the regulatory framework, and to eliminate bureaucratic obstacles affecting storage systems. "With the storage strategy, energy policy is

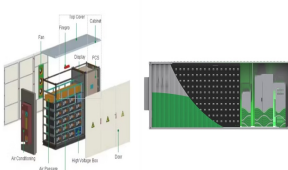
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1.1.1 The basic principle for energy policy is laid down in the German Energy Industry Act (Energiewirtschaftsgesetz (EnWG)). The purpose of the EnWG is to bring about a reliable, fairly-priced, consumer-friendly, efficient and environmentally compatible supply of electricity and natural gas, increasingly based on renewable energies.



3. Adele ??? Compressed Air Energy Storage System. The Adele ??? Compressed Air Energy Storage System is a 200,000kW compressed air storage energy storage project located in Stasfurt, Saxony-Anhalt, Germany. The rated storage capacity of the project is 1,000,000kWh. The electro-mechanical battery storage project uses compressed air storage



Key to Germany's energy policies and politics is the "Energiewende", meaning "energy transition". Energy Storage: The German energy storage market has experienced a massive boost in recent years. Germany is the global leader in energy storage technology for renewable energy systems. While the demand for energy storage is growing