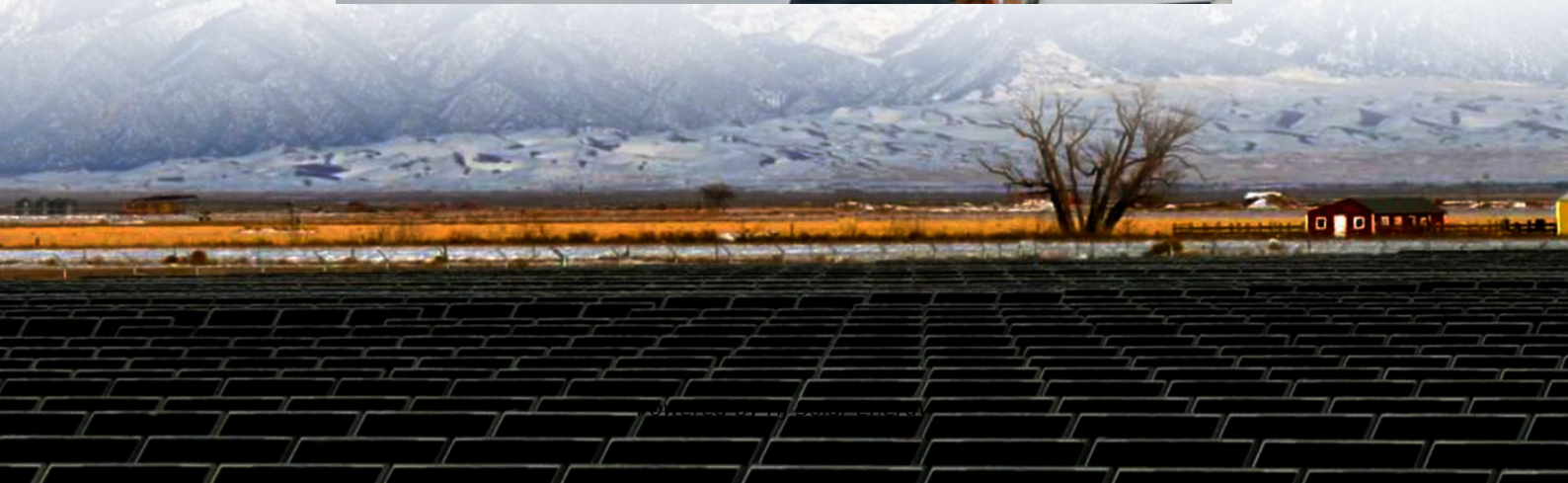


# **Flow battery system project financing options in Germany 2025**





## Overview

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What is the world's largest flow battery project?

Construction is underway on the world's largest flow battery project at a key cross-border grid hub where Germany, France and Switzerland converge. The project aims to stabilise power flows across national lines, bolstering energy resilience and supporting long-duration renewable integration.

How much energy will Germany install in 2023?

Germany added 6.1 GWh of installations in 2023, and for 2024, new installations are projected to grow by 17%, reaching approximately 7.1 GWh. Additionally, Germany led Europe in residential energy storage, installing 555,000 units (5.0 GWh) in 2023: a 166% YoY growth—accounting for 52.6% of Europe's new installations.

What is a flexbase flow-battery?

Designed to operate for hours or even days, it avoids the use of critical raw materials, offering a safer, scalable solution for Europe's energy needs. "Building an 800MW and 1.6GWh flow-battery is something nobody has ever done before," said Marcel Aumer, group CEO, VRP and co-founder of FlexBase Group.

Can a flow battery handle extended dips in renewable output?

German Institute for Economic Research (DIW) research suggests up to 35TWh of such storage may be required to handle extended dips in renewable output. Insights from the Laufenburg flow battery project and sector developments will be shared at the International Flow Battery Forum in Vienna, taking place 24-27 June 2025.

What is the market share of Bess batteries in 2023?

With a 72.3% market share, lithium-ion batteries dominate grid scale BESS applications and are set to remain the top choice for future needs. Germany



led the European BESS market in 2023, with a 34% share, followed by Italy at 22% and the UK at 15%.



## Flow battery system project financing options in Germany 2025

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### Europe's largest flow battery project launched to boost ...

Construction work for the world's largest flow battery has started at the strategic critical electrical grid interconnection point on the borders of Germany, France, and Switzerland.

### [ESS in 50MW iron flow battery project for Germany](#)

June 15, 2023: ESS today announced plans to build a 50 MW/500 MWh iron flow battery system in eastern Germany in partnership with domestic energy firm LEAG. The flow battery system at the Boxberg Power Plant site is to be ...



### Posters

Below you can find the list of posters presented at the IFBF 2025. The posters can be downloaded in pdf. Using Galvani potential difference in biphasic flow batteries, Vahid Abbasi, ...

### Will this startup finally crack the code on flow battery tech?

The biggest flow battery in the world is reportedly a 100 -megawatt/ 400 -megawatt-hour vanadium redox flow system in Dalian,



China. Other major flow-battery projects ...



[Understanding the Cost Dynamics of Flow Batteries ...](#)

It's integral to understanding the long-term value of a solution, including flow batteries. Diving into the specifics, the cost per kWh is calculated by taking the total costs of the battery system (equipment, installation, operation, ...



**Energy Outlook 2025: Energy Storage**

Beyond batteries, China is further developing a number of non-battery storage projects including the world's largest flywheel energy storage project (30 MW) which was connected to the grid in 2024. It would seem likely ...



[Ambri for sale, German Na-ion consortium, ESS Inc ...](#)

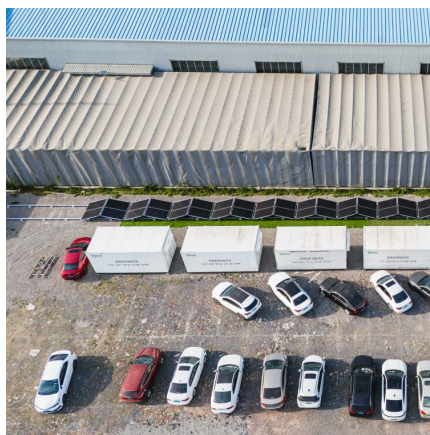
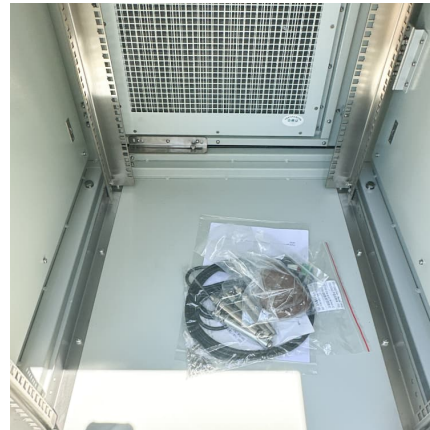
News in brief with liquid metal battery maker Ambri, German government-funded sodium-ion initiative, and ESS Inc flow battery at airport.





## Energy Storage Grand Challenge Energy Storage Market ...

This report covers the following energy storage technologies: lithium-ion batteries, lead-acid batteries, pumped-storage hydropower, compressed-air energy storage, redox flow batteries, ...

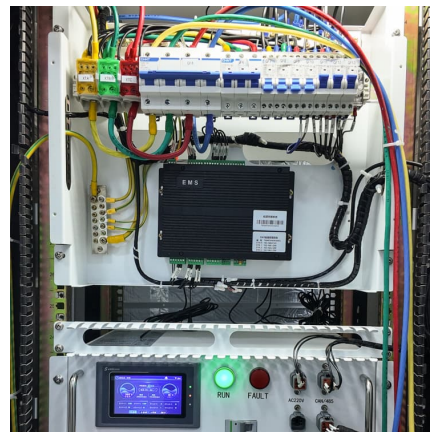


### [ESS Inc: 'Transformative agreement' with EXIM to ...](#)

ESS Inc. CEO Eric Dresselhuys (right) at the announcement of the 500MWh project with LEAG in Germany, in 2023. Image: ESS Inc. Executives at US flow battery manufacturer ESS Inc. have said the company will be able ...

### [What's Behind China's Massive New Flow Battery ...](#)

Design of a vanadium redox flow battery system  
This groundbreaking project promotes grid stability, manages peak electricity demand, and supports renewable energy integration. It also plays an important role in ...



### [Global Battery Tech and Energy Storage ...](#)

Record-Breaking Flow Battery Projects: Long-duration energy storage made headlines in June with projects dwarfing previous installations. In Switzerland, authorities approved construction of an 800 MW/1,600 MWh ...



## Battery Energy Storage Systems

Battery Energy Storage Systems (BESS) are crucial for integrating renewable energy and enhancing grid reliability, with global deployment accelerating significantly. By late ...



## News

Europe's largest flow battery project launched to boost energy security 18 June 2025: Construction work for the world's largest flow battery started this month at the strategic criticalectrical grid interconnection point on ...

## Homepage

Flow Batteries Europe Flow Batteries Europe represents flow battery stakeholders with a united voice to shape a long-term strategy for the flow battery sector. We aim to provide help to shape ...



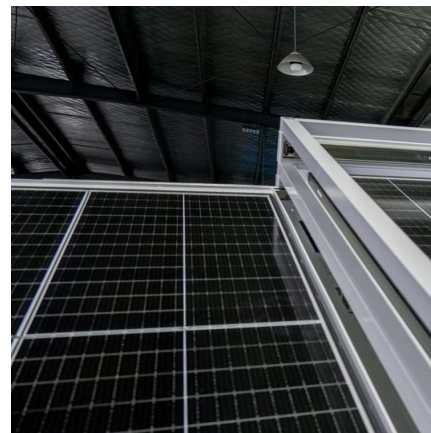


### [Europe's Largest Flow Battery Project Launched to ...](#)

Construction work for the world's largest flow battery started last month at the strategic critical electrical grid interconnection point on the borders of Germany, France, and Switzerland. The site's location will enable the system ...

### **JenaBatteries GmbH**

A call to flow battery experts - join FBE in representing interests of flow battery research in Batteries Europe 09 October 2023: In January 2023, FBE joined Batteries Europe, a European ...



### [EU-Funded Projects - Batteries Europe](#)

In this context, the EU-funded Battery2Life project aims to transform used batteries into valuable assets by revolutionising battery system designs and management. By introducing adaptable ...

### **The breakthrough in flow batteries: A step forward, but ...**

Flow batteries are emerging as a transformative technology for large-scale energy storage, offering scalability and long-duration storage to address the intermittency of renewable energy sources like solar and wind. ...



**BESS in Germany 2025 and Beyond:**

These investors offer longer-term financing solutions with substantial debt volumes, enabling projects to meet their capital needs during later development stages.



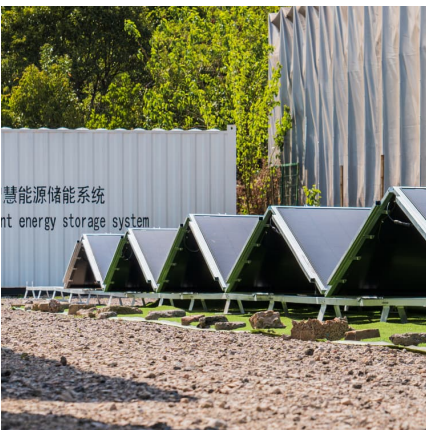
Iron flow battery company ESS will build the ...

Iron-saltwater flow battery company ESS Inc looks set to deploy by far its largest project to-date, a 50MW/500MWh system at a renewables hub from German energy firm LEAG, with potential for more. The NYSE-listed firm ...



**Maximizing Renewable Energy Investments: The Power of ITC Financing**

Additionally, the Battery Energy Storage System (BESS) portion of the project could have separate financing terms and investors, as it would likely qualify for a 2025 ...





### **Aramco launches renewable energy storage system for gas ...**

General , May 26, 2025 Aramco launches renewable energy storage system for gas operations Located in Wa'ad Al-Shamal, in western Saudi Arabia, the 1-MW/hour flow battery system is ...



### **Capacity Market vs Energy-Only - the German Debate Intensifies**

11 ????? In a previous analysis of Germany's renewable energy opportunities, we noted ongoing discussions around a potential capacity market mechanism by 2028. The industry ...

### **BESS in Germany 2025 and Beyond:**

In 2024, Germany's four major transmission operators registered 161 GW of storage projects, excluding distribution system operator requests, which manage electricity delivery from ...



### [1.6 GWh flow battery project launched in Europe](#)

Leaders from FBE and the private equity-backed FlexBase Group met in Laufenburg, Switzerland to mark the launch. The flow battery system, on a 20,000 m2 site, will be able to store energy for hours or even ...



### What's Behind China's Massive New Flow Battery Breakthrough?

Design of a vanadium redox flow battery system  
This groundbreaking project promotes grid stability, manages peak electricity demand, and supports renewable energy ...



### Swiss developer breaks ground on 1.6 GWh redox flow storage project

Flexbase Group has begun construction on what could become one of Europe's largest flow battery storage installations, breaking ground on an 800 MW/1.6 GWh redox flow ...



### [Battery Energy Storage Systems Report](#)

This information was prepared as an account of work sponsored by an agency of the U.S. Government. Neither the U.S. Government nor any agency thereof, nor any of their employees, ...



### **Global Battery Tech and Energy Storage Developments (June-July 2025)**

Record-Breaking Flow Battery Projects: Long-duration energy storage made headlines in June with projects dwarfing previous installations. In Switzerland, authorities ...

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