



# Flow Batteries Europe a year in: A brief overview



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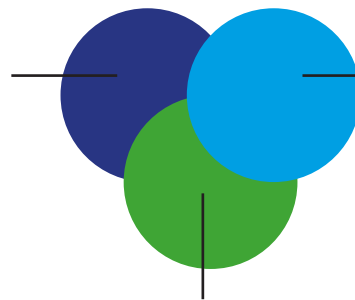
On 28 April 2021, **16 flow battery stakeholders** came together to create Flow Batteries Europe. The first year of our association was dedicated to getting to know our members, their work and the challenges they face, establishing our structure, defining the key priorities for FBE going forward, as well as starting with our first advocacy efforts. This report looks at the past year and some of our key achievements.



## GENERAL UPDATES

In 2021, after consulting with the members on the most important points that FBE should tackle, we decided to establish three Committees to move our work forward:

**BUSINESS DEVELOPMENT:**  
working on green financing and flow battery business cases.



**TECHNOLOGY:**  
working to identify sustainability advantages of flow batteries.

**COMMUNICATIONS:**  
working to increase the visibility of the association.

With the same aim of wanting to provide an added value to the FBE Members, we exchanged with the membership to identify interesting topics for workshops that could help the understanding of the EU bubble and funding opportunities. So we organised three workshops for our members on the following topics:

- The Horizon Europe funding framework.
- How Brussels works: key aspects of lobbying.
- The Innovation Fund.

We have also continuously kept track on and updated our members on key pieces of legislation and funding opportunities, building on the information shared during the workshops.

In addition, in the first half of 2022, we welcomed two new members:

**Bryte Batteries**  
a start-up from Norway



**SBaA**  
a battery alliance from Slovakia

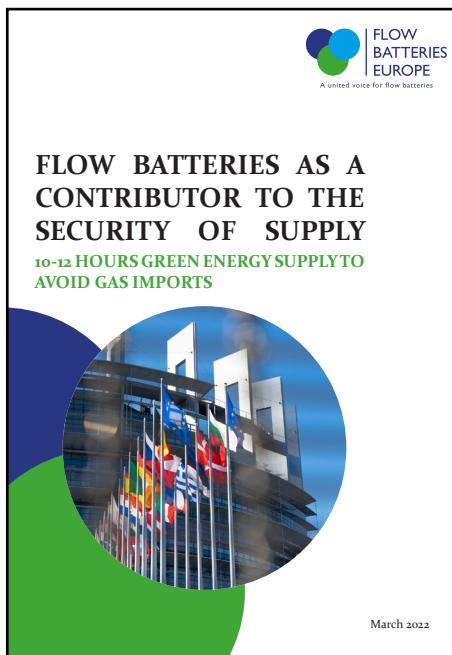
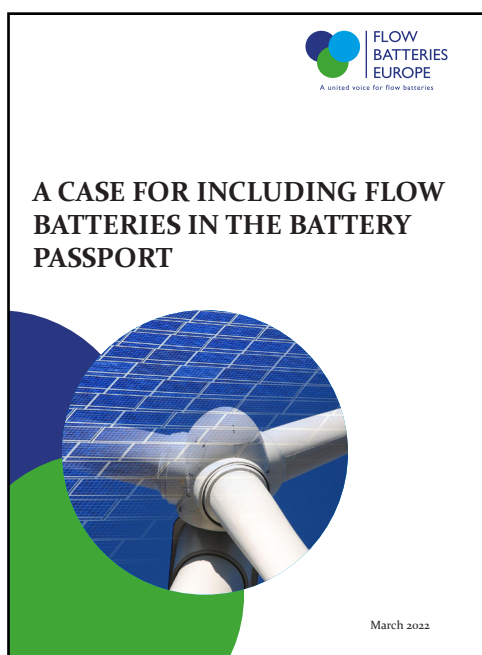


## ADVOCACY WORK

### BATTERIES REGULATION AND SECURITY OF SUPPLY

The key advocacy efforts in 2022 have been focused around the Batteries Regulation<sup>1</sup>, the major piece of legislation which will govern the sustainability and safety of batteries in the years to come. Currently, flow batteries are excluded from the key provisions of the Batteries Regulation, including the Battery Passport and the carbon footprint calculation and declaration. We see this as problematic, because excluding flow batteries from these provisions may negatively affect their position in the market. This would in turn negatively affect the achievement of security of energy supply<sup>2</sup>, which has been a key focus in Europe in the past few months. In addition, exclusion may fail to provide all battery manufacturers with sufficient incentives to ensure the sustainability of their production processes and supply chains and may lead to different methodologies on how to assess sustainability.

To explain our position in more detail, FBE published two relevant positions papers:



<sup>1</sup> Flow Batteries Europe, [A case for including flow batteries in the Battery Passport](#), 2022

<sup>2</sup> Flow Batteries Europe, [Flow batteries as a contributor to the security of supply](#), 2022

In addition, we have reached out to over 115 European policymakers, and will continue advocating for our position with the help of our members.

## DELIVERING THE EUROPEAN GREEN DEAL (FIT FOR 55) PACKAGE AND THE RENEWABLE ENERGY DIRECTIVE III



To the kind attention of:  
European Commissioner Frans Timmermans  
European Commissioner Kadi Simson  
European Commissioner Maroš Šefčovič  
European Commissioner Mariya Gabriel  
French Presidency of the Council of the European Union  
Rapporteurs from the European Parliament on the Delivering the European Green Deal package

### More provisions for long duration energy storage needed in the Delivering the European Green Deal package

Brussels, 3<sup>rd</sup> February 2022

Dear colleagues,

The European Union's commitment to work towards net zero emissions by 2050 has been a landmark achievement in the fight against climate change. To achieve carbon neutrality by 2050, all electricity generation must be decarbonised, as the hard-to-abate sector cannot decarbonise as fast. This means that far more renewables need to be introduced into the energy system, leading to less back-up power from fossil fuel plants.

The more renewable energy is introduced, the more flexible the entire energy system set-up must be, and the more need there is for adding capacity, shifting load, and/or improving power quality through energy storage solutions. As electricity coming from renewable resources is fluctuating, solutions are needed to ensure power availability and grid stability. Energy storage therefore has a fundamental role to play in the clean energy transition, ensuring that more renewable energy can be introduced into the grid.

Currently, batteries are mostly used in up to 4-hour storage applications for frequency control or fossil-fuel peaking plant replacement. However, with more renewables in the energy system, adding longer-duration storage is inevitable. The study "Storage in the Loop", undertaken by the Fraunhofer Institute and the Institute of Information Systems and Marketing, investigated the possibility of implementing 100% renewable energy in the German land of Baden-Württemberg. The study identified "renewable gaps", where, in a one-hour period, the total renewables production is less than 50% of the total load. The results show large peaks for not only 1- to 2-hour gaps, but also 8- and 10-hour gaps, thus indicating that long-term storage solutions are fundamental to achieving carbon-neutrality.

Installing more long-term storage will also allow for significant savings in investment needed for our energy transmission infrastructure. This will keep electricity prices more stable and more affordable for the European end users. Large investments in energy infrastructure are needed for the energy transition, with capital flowing away from fossil fuels and toward clean power and other climate solutions. The years between now and 2030 are critical in the race to net zero, and long-term storage is still in its infancy, needing much stronger policy support and investment.

Therefore, we call for the following provisions in the Delivering the European Green Deal package:

- More favourable legal framework for the large-scale deployment of energy storage solutions across all EU Member States. This would include:

Delivering the European Green Deal (Fit for 55) package refers to a set of proposals to revise and update legislation at the EU level to ensure a 55% reduction in greenhouse gas emissions by 2030. This aim is in line with the larger goal to achieve carbon neutrality by 2050.

To ensure that sufficient attention is dedicated to long-duration energy storage (LDES) technologies, including flow batteries, FBE initiated a common letter<sup>3</sup> to the EU policymakers responsible for this package. We asked for the following:

- **More favourable legal framework for LDES**, including new revenue streams, easier permitting procedures, no double taxation or grid costs for stored energy, consideration of energy storage as a separate asset class, longer contracts, allowing revenue stacking, and revision of the EU system modelling.

- **Increasing funding opportunities for LDES**, including more Research & Development support, support for more demo projects, and endorsement of storage as an important green investment opportunity.

The letter was co-signed by 10 other European and national energy associations.

Following this, FBE, along with four other associations, also provided comments on the proposed Renewable Energy Directive III. Among our key pieces of feedback, we recommended that the Directive should include a definition of a "co-located energy storage project." In our view, this would help prevent administrative burdens on renewable energy projects coupled with energy storage facilities, which occur due to differing frameworks at Member State level.

## OTHER ADVOCACY ACTIVITIES

FBE has responded to two consultations: the UK government's call for evidence<sup>4</sup> on facilitating the deployment of large-scale and long-duration electricity storage and the European Commission's consultation<sup>5</sup> on renewable permitting and Power Purchase Agreements. In both cases, FBE noted that the deployment of more LDES technologies is crucial to ensure that more renewable energy is introduced into the energy system as well as to avoid curtailment.

<sup>3</sup> Flow Batteries Europe, [More provisions for long-duration energy storage are needed to achieve carbon neutrality](#), 2022

<sup>4</sup> Flow Batteries Europe, [FBE calls for more investment into the development and deployment of long storage technologies](#), 2022

<sup>5</sup> Flow Batteries Europe, [FBE responds to consultation on renewable energy projects](#), 2022

Among the key provisions, FBE recommended that policymakers consider the following:

- Energy storage should be established as a **separate asset class**, alongside generation, distribution & transmission, and consumption. This would prevent double taxation and allow for a market price of capacity, not just of power.
- Renewable projects should be required to **self-balance** and be capable to **dispatch against schedule**. This would encourage more energy storage projects and reduce the reliance on fossil fuels plants as back-up.
- There should be more emphasis on using more **renewable power** instantaneously at any given time, rather than just producing more renewable energy in total.

In addition, FBE, with the help of our members, successfully lobbied to remove the statement on page 21 of the Batteries 2030+ Roadmap, which previously stated that flow batteries have a large environmental footprint. Instead, the updated Roadmap mentions different types of flow batteries available and notes their advantages in terms of levelised cost of storage and contribution to the broader deployment of renewable energy generation.

## COLLABORATIONS

### INTERNATIONAL FLOW BATTERY FORUM

This year, FBE is supporting the International Flow Battery Forum conference in Brussels, Belgium. The conference will take place on 28-29 June 2022, and it will be the first physical IFBF symposium in two years! We expect participants from all over the world, interesting presentations and meaningful discussions. In addition, participants can sign up for a pre-conference workshop, organised by two European flow battery projects: CompBat and SONAR, which will take place on Monday 27 June 2022.

FBE members are offered a discount for the tickets. We look forward to seeing you there!

### JOINT ADVOCACY EFFORTS

FBE has been very happy to support the advocacy efforts initiated by other energy associations. We have co-signed three letters:

- Two letters initiated by the smartEn association on more provisions for system efficiency<sup>6</sup> and demand-side flexibility<sup>7</sup> regarding buildings, vehicles and the electricity system in the Fit for 55 package.
- A letter initiated by EASE on more energy storage provisions<sup>8</sup> in the REPowerEU Action Plan.

### OTHER EVENTS

FBE has participated in four key events:

- International Flow Battery Forum Symposium 2021.
- Energy Storage Global Conference 2021.
- Battery Innovation Days 2021.
- The HIGREEW workshop 2022.

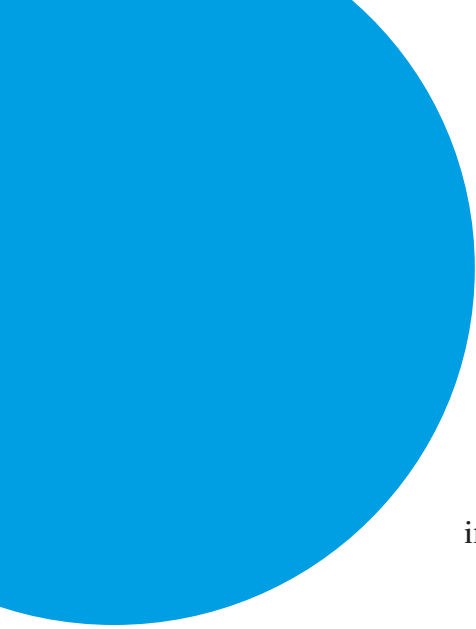
In all of the events, the FBE Secretariat and our President were honoured to give presentations on our association, vision and objectives, and to meet some of the key stakeholders in the energy storage world.

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<sup>6</sup> SmartEn, [Joint letter: Increasing System Efficiency in the 'Fit for 55' Package through the active participation of end-users](#), 2021

<sup>7</sup> Flow Batteries Europe, [11 European associations sign joint letter on the "Fit for 55" package](#), 2021

<sup>8</sup> EASE, [European Energy Security Needs Energy Storage](#), 2022



As you can see, in its first year, FBE focused mainly on urgent topics related to longer duration energy storage and revenue streams, establishing its first common positions on topics ranging from the strong push for being covered by the sustainability requirements of the new Batteries Regulation to important communication standpoints.

**The FBE Secretariat would like to thank all of our members for their continuous support and contribution. We look forward to continuing our important work together.** For the next year, we foresee even more activities linked to the security of supply and the role of flow batteries in avoiding curtailment of renewables and therefore import of gas for peaking plants.



## **CONTACT US!**

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