

A UNITED VOICE FOR FLOW BATTERIES

Main takeaways from the webinar

The webinar - organised by CLERENS and IFBF on Thursday 17 December 2020 - gathered more than 50 participants from all over the world, getting together the main players in a constructive discussion for the future of the sector. The participants expressed their views on the future of Flow Batteries, and contributed to identify the main challenges and the opportunities for a stronger flow batteries representation.

It was clearly identified by the participants that no EU wide representation was a major drawback for Flow Batteries and therefore supported to create an EU body representing the sector, in the frame of a larger international framework.

The webinar was the occasion to exchange views on the main challenges and opportunities for flow batteries development and representation in Europe and around the world.

The topics and priorities discussed can be categorised in four different macro-areas:

1. The need for Research & Demonstration for Flow Batteries and defining the priorities for the funding for Flow batteries

- Most research focus today is dedicated to materials and chemistry. However, greater focus should be put on manufacturing and cell design, as well as reliability and the need to standardise the products in order to reduce the prices. Overall, more effort on the identification of the main research and demonstration challenges for flow batteries is needed.
- Sustainability could one of the bigger focus in Flow Batteries Development. This can represent a competitive advantage compared to the other, more common battery technologies.
- The same argument could be done for safety. Flow Batteries do not catch fire and can be put safely into buildings.
- The main challenges for the Flow Batteries R&D, however, is that **Flow Batteries topics are barely mentioned in EU calls**. In fact, it seems that the EC is strongly biased towards other technologies, in no small part because the lobbying from the other sector is more influential. The lack of strong support for Flow Batteries make it very difficult to get the added value of Flow Batteries visible at the EU or national level.

2. What commercial, market and regulatory lobbying activities are required?

- The key is to create a market demand: there are clear added values compared to other technologies, but the cost is higher than e.g Li-ion batteries. This means there is a need to support the roll-out politically and financially, as was done for other technologies in the past.
- Li-ion batteries got the prices down by sheer scale which was in turn achieved by coupling them with the electric vehicle industries. The question is with which technology should Flow-Batteries link and how could this lead to lower prices and mass production? Suggestions were to link them to the photo-voltaic roll-out and the wind farm balancing.
- One of the mistakes of the sector is looking at each other just as competitors: **the flow battery stakeholders need to work together**. Cooperation between companies should be promoted in the association.

3. Cross cutting issues in the Flow Batteries value chain representation

- Flow batteries should grow into large scale to get the costs down and get more competitive. In order to do so, it is important to look at the right markets. It is important for flow battery industry to **identify the main strength and selling points**.
- Flow Batteries should talk to the European institutions and be represented as a unified technology. This means that **standardisation is key**, and the association should push for this to happen in Europe.
- Flow Batteries can have **lower CAPEX and LCOS** compared to other battery technologies. Furthermore, they are greener and **more sustainable** than li-ion. The association should focus on these strengths to promote the technology.
- Alternative markets should be explored: so far, the main focus has been on large-storage applications, where the competition is very high. There is a general agreement that the main research and investment fields for flow batteries should be not only stationary but also EV applications.
- More demonstrations and success stories involving flow batteries are needed. This should be done at an increasingly higher scale, to demonstrate the viability of Flow Batteries for performance, operation and integration into systems.

4. Association setting up

- There was an agreement among the participants on the need for a stronger united voice for Flow Batteries, which can take the form of a Flow Batteries Association. Furthermore, the participants agree that the association can serve as the first regional cluster of the IFBF, representing the interests of flow batteries stakeholders at the EU level.

- The Clean Energy Package is pushing a lot for a major use of renewables' storage. The association should lobby for better and more inclusive battery regulations, taking also into account the environmental impact.
- Big companies in Europe are interested and are looking at it seriously. How do we influence the market to move in this direction? The association should push for the visibility of Flow Batteries to highlight the main strengths.
- **Challenges for the association: finance and cost.** As of today, is hard for small companies to join an association. Some solutions need to be explored to solve this challenge.