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A united voice for flow batteries

THE NET-ZERO INDUSTRY ACT NEEDS MORE AMBITION TO EFFECTIVELY PROMOTE SUSTAINABLE TECHNOLOGIES

POSITION PAPER



OCTOBER 2023

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Flow Batteries Europe Position Paper – October 2023

Introduction

Flow Batteries Europe (FBE) welcomes the Net-Zero Industry Act (NZIA) proposed by the European Commission on March 16th 2023. The EU's primary objective through the Green Deal is to enhance competitiveness while simultaneously reducing emissions. To achieve this, the EU must **boost the development and production of sustainable technologies**.

The Commission's proposal presents a list of eight strategic net-zero technologies, appropriately including battery and storage technology. This not only promotes targeted support and investment in these designated areas, but also prioritises technologies that have demonstrated their effectiveness in contributing to net-zero objectives. Nonetheless, we have profound concerns regarding recent developments proposed by the European Parliament, which if confirmed, could undermine the progress of the EU's climate and energy action plan.

Additionally, the NZIA proposal lacks a concrete objective for the battery sector and adequate funding provision to enable the attainment of the goal of expanding the green-manufacturing capacity in the EU. Further, a lack of coherence between EU chemicals legislation and the NZIA risks jeopardising the effectiveness of the NZIA. Below, FBE outlines its position on how to improve the proposal and to include a more comprehensive strategy for the battery sector's development within the framework of the Act.

1. Supporting net-zero manufacturing targets

Identified issue

The proposed Act lacks a concrete objective for the battery sector, and gives only a general 40% EU manufacturing target by 2030 for all listed technologies. The poorly defined target does not accurately represent differences in the EU's clean tech sector capabilities.

Explanation

Although the Commission lists eight strategic net-zero technologies, the category of 'energy storage technologies' includes five different energy storage categories (chemical, electrochemical, electrical, mechanical and thermal). Determining a common goal for eight different net-zero technologies with their own sub-categories brings little to no value. It may not be feasible for the EU or its Member States to allocate resources to all technologies simultaneously and the goal does not provide clear guidance for the investors. Some technologies risk being neglected or underfunded.

If the majority of net-zero technology manufacturing capacity becomes concentrated in just a few areas, the Union's progress toward its objective will lose significance and progress monitoring won't reflect the actual status of deployment needs. To ensure a balance in the distribution of benefits, permits, and support, it is essential to establish targets tailored to each sector. A successful green transition heavily relies on energy storage, making it a crucial aspect that cannot be overlooked.

Recommendation

It is crucial for the European Commission to set sector-specific targets, improving the NZIA's efficiency and simplifying its monitoring.

The endorsement of specific targets at the European level provides a clear and consistent indication of the direction and ambition of EU energy policy. Targets signal consistency of future demand in the market. They provide a sense of stability and predictability that encourages private sector investments in associated supply chains.

2. Focus on the net-zero technologies

Identified issue

Given the recent discussions in the European Parliament, it was proposed to widen the scope of the Regulation to a broad range of technologies and to remove the initial Annex of strategic net-zero technologies. We are highly concerned that expanding the scope of the technologies is deprioritising recognised strategic clean technology industries and undermines the purpose of this Act to boost the EU's clean tech manufacturing.

Explanation

We would like to highlight, that the European Commission has already identified in the NZIA Annex the essential solutions to prevent Europe from falling behind in the global clean tech competition. In the midst of the unprecedented increase of wildfires and other extreme weather events across Europe, coupled with challenges in energy pricing, geopolitical tensions, and global competition in clean technology, it is imperative for the EU to prioritise targeted investments where they are most critically required – proposed by European Commission list of strategic net-zero technologies. Additionally, we support the inclusion of key components, materials and machinery of the strategic net-zero technologies within the scope of the NZIA.

Recommendation

NZIA should prioritise globally recognised clean technologies tailored to meet the demands of both domestic and global markets. We strongly urge EU institutions to retain a well-defined and concise Annex featuring the strategic net-zero technologies initially proposed by the European Commission. This approach is crucial for bolstering clean tech manufacturing and ensuring that the Act remains aligned with its core objectives.

3. Funding and investments

Identified issue

The proposal for the NZIA notes that “Access to finance is key (...) for establishing a solid manufacturing base for net-zero technologies and their supply chains across the Union.”¹ However, whilst acknowledging that in some cases, private investment may not be sufficient, **the NZIA relies too much on State aid as a source of public support, rather than introducing further much-needed funding for strategic net-zero technologies like flow batteries.**²

Explanation

The NZIA proposal mentions several existing funding programmes for net-zero technology manufacturing projects, for example the Recovery and Resilience Facility, InvestEU, cohesion policy programmes, and the Innovation Fund. FBE welcomes the availability of these programmes, and emphasises their role in facilitating the development of net-zero industrial capacity. However, the NZIA does not create new funds at the EU level which could be directed towards net-zero technology manufacturing projects such as those associated with flow batteries.

In June 2023, the European Commission introduced the Strategic Technologies for Europe Programme (STEP), an initiative intended to complement the NZIA.³ In contrast, the previously announced Sovereignty Fund has been relegated to a secondary priority, with plans for its establishment set for the future. The proposed STEP has a much broader scope than the NZIA, covering deep and digital technologies, clean technologies, and biotechnologies. Whilst not seeking to diminish the respective value of the other sectors included within the STEP, its broad focus risks diverting focus from strategic net-zero technologies, and undermining in part the objectives of the NZIA. Ultimately, the NZIA relies too heavily on State aid by Member States as a funding mechanism, relying on Member States’ existing budgets. This gives rise to a risk of single market fragmentation and the disruption of a level playing field across the Union, especially if Member States decide to further designate their own policies in this sphere.

The NZIA lacks levers to ensure new investments will in fact be directed to industrial projects, and needs specific and designated funding directed towards strategic net-zero technologies in

¹ Recital 40 of EU Commission’s proposal for the NZIA

² Recital 41 of EU Commission’s proposal for the NZIA

³ European Commission, [EU budget \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/inline-photos/attachment-data/file/attachment)

order to fulfil its objectives. The NZIA's core objective is to address the global competition in clean tech manufacturing. While other countries have presented straightforward and transparent incentives, as seen in the Inflation Reduction Act in the U.S., it seems that the EU focuses primarily on indicating the availability of funding within its programs. However, this approach overlooks the fact that the success rate for obtaining this funding is often very low. This implies that the available funding and the aspirations of companies do not align effectively.

Recommendation

FBE calls on the European Commission to set up specific funds for net-zero strategic technologies and to detail how manufacturing projects will be able to access financing.

We need to ensure that investments are allocated where they are needed the most, in the strategic net-zero technologies with the highest impact for the green transition. Whilst the NZIA is a promising proposal to support technological production in the EU, it must raise its ambition level and support project financing in a more meaningful way.

4. Coherence between EU legislation: PFAS restriction proposal and NZIA

Identified issue

Currently proposed restriction of per- and poly-fluoroalkyl substances (PFAS) by the European Chemicals Agency (ECHA) lacks coherence with the rest of the EU legislation and conflicts with the NZIA and broader climate goals. The outright and immediate ban of PFAS would have a big impact on battery and storage technologies, including flow batteries. Fluoropolymers – present in all market-available flow batteries' membranes as well as several other components of the flow battery stack – are considered as PFAS under the proposed restriction. Such a restriction would have grave implications for the production of many strategic net-zero technologies under the NZIA.

Explanation

The proposed EU chemicals legislation restricting PFAS undermines the objectives of the NZIA in several ways. Even before entering into force, the proposal signals a non-friendly climate for investors in respect of strategic net-zero technologies that would be impacted by the proposal, such as flow batteries. Given the prominence of substances that would be impacted by the PFAS proposal, the restriction both shakes confidence in the sustainability and safety credentials of this technology, and generates uncertainty as to the future of several of these strategic net-zero technologies.

We therefore find ourselves in a situation where the objective of the NZIA to attract investment for these technologies is being undermined by the concurrent PFAS restriction proposal, which casts doubt on the future of the many flow battery and other net-zero technologies which use them in a safe and sustainable manner. Should the PFAS restriction as proposed enter into force,

this would threaten the production and adoption of strategic net-zero technologies within the European Union, and risk reducing the competitiveness of this blossoming industry. The EU risks losing key future industry players to markets like the US, which is presently encouraging large-scale investments in equivalent technologies through its Inflation Reduction Act of 2022.

Recommendation

In our recent [Position Paper](#) on the proposed PFAS restriction, **we called on the ECHA to exempt fluoropolymers from the restriction, or if this cannot be achieved, to set a 13.5-year derogation, allowing the flow battery sector to transition away from PFAS' in an economically viable and sustainable manner**, noting the contribution of flow batteries to the REPowerEU and Green Deal objectives. We call on the European Commission to work with the ECHA to ensure that EU chemicals restriction does not undermine the NZIA, so that strategic net-zero industries can continue to thrive, grow, and assist us in the fulfilment of the EU's ambitious climate goals.

Summary

Flow batteries are one of the strategic net-zero technologies as defined in the NZIA proposal. Certain energy storage gaps can and should be effectively filled by flow batteries. Flow batteries allow the decoupling of power and energy capacities, enabling greater flexibility in matching power and duration requirements. They are well-suited for long-duration storage needs, where their ability to store energy over extended periods at a consistent performance level becomes highly valuable.

A strong and comprehensive industrial plan is vital for the development of a resilient European clean tech manufacturing sector. For the integration of a more all-encompassing strategy for the advancement of the battery sector, FBE presents following recommendations:

1. **Sector-specific targets:** the EU should establish targets specific to each sector.
2. **Avoiding widening the scope of the NZIA:** we urge EU institutions to retain a well-defined and concise Annex featuring the strategic net-zero technologies initially proposed by the European Commission.
3. **Specific funds:** the European Commission should allocate specific funds to strategic net-zero technologies such as flow batteries.
4. **Ensuring coherence:** the European Commission should work with the ECHA to ensure coherence between EU chemicals legislation and the NZIA.

ABOUT FLOW BATTERIES EUROPE

Flow Batteries Europe (FBE) 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 the legal framework for flow batteries at the EU level, contribute to the EU decision-making process as well as help to define R&D priorities. FBE is working to create and reinforce networks between key stakeholders in the flow battery industry.

FOR FURTHER INFORMATION

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