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European Produced sustainable SODium-ion battEries for stationary applications



EPISODE - Deliverable report

D6.4 – Quality assurance & Risk Management plan



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This project has used a standard Uniresearch Quality Assurance and Risk Management Plan methodology already developed in, among others, the ELECTROLIFE project (Grant Agreement number: 101137802), following EU recommendations. In the assignment of the lump sum budget, efficiency gains in preparing this report were considered. Modifications were added to comply with the Grant Agreement conditions for EPISODE (Grant Agreement number: 10119867).

Project Scientific Abstract

D6.4 – Quality assurance & Risk Management plan (SEN)

The main mission for EPISODE is to develop a non-lithium battery technology based on abundant available low-cost materials, with attractive energy density and power metrics (close to that of LFP-based Li-ion batteries counterparts), that are durable (> 15 years and > 5,000 cycles), have a high round-trip efficiency (>95%), are non-toxic, non-critical, intrinsically safe and recyclable. A further aspect of this mission is that the production processes for the anode, cathode, electrolyte solutions and binders as well as cell production will be sustainable, energy-efficient and demonstrated at industrial mass manufacturing scale. Combining all of this leads to a non-lithium modular battery system with favourable CAPEX (< 150 €/kWh storage capacity), OPEX (approx. 0.03 €/kWh/cycle) and carbon footprint (<100kgCO₂eq/kWh), enabling energy storage applications, ranging from domestic installations (multiple units of 6.2 kWh/unit) to be demonstrated in the project with projections towards large utility installations of multiple MWh. Consequently, this will establish a European-based, globally competitive battery supply- and value chain that supports economic prosperity and the net-zero transition. The integrated material-manufacturing and sustainability assessment approach in EPISODE will transform the existing (Li) battery manufacturing process into a sustainable one to meet the future needs of the sustainable and resilient EU battery industry.

Public summary

The scientific and technical lead of Episode (FAAM) is responsible for technical coordination and scientific quality assurance throughout the project. This task involves monitoring technical progress, coordinating input/output flows between the various work packages and tasks, and risk monitoring. This document, Deliverable D6.4, is the “Quality Assurance and Risk Management Plan” that describes how the quality of the work will be ensured and how risks will be identified and managed.

Technical progress will be monitored through discussion at the project management meetings (at least twice per month) and executive board meetings (once a month). When necessary, corrective actions will be taken including potential work reallocation. Such corrective actions will be agreed by the executive board consisting of all WP leaders and coordinated by the Project Manager (UNR).

Quality assurance of all project deliverables will be conducted by the executive board or their designated representatives. This procedure will ensure that all deliverables contain the required information and the partners fulfil their obligations in line with project targets.

The “Quality Assurance and Risk Management Plan” is a live document containing the risk register which will be continuously monitored and updated throughout the lifetime of the project to reflect known risks, identify emerging risks, and, where necessary, mitigation measures to respond to them. The initial risk register has been compiled from risks identified in Annex I, part A of the Episode Grant Agreement, and will be monitored and updated during the course of the project. The Executive Board will ensure that the Risk Management Plan is kept up to date through discussion during the monthly meetings.

4 Acknowledgement

The author(s) would like to thank the partners in the project for their valuable comments on previous drafts and for performing the review.

Project partners:

#	Partner short name	Partner Full Name
1	FAAM	FIB SPA
3	EnBW	ENBW Energie Baden-Wurttemberg AG
3.1	SEN	SENEC GMBH
4	EGP	ENEL GREEN POWER SPA
4.1	EnelX	ENEL X SRL
5	ARK	ARKEMA FRANCE SA
6	UPC	UP CATALYST OU
7	CID	Fundacion CIDETEC
8	ISE	Fraunhofer Gesellschaft zur Forderung der Angewandten Forschung EV
9	UAH	Universidad de Alcala
10	WMG	University of Warwick
11	KIT	Karlsruher Institut für Technologie
12	UNR	Uniresearch B.V.

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