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EUROPEAN COMMISSION

HORIZON 2020 PROGRAMME - TOPIC H2020-LC-BAT-2019
Affordable High-Performance Green Redox Flow Batteries

GRANT AGREEMENT No. 875613

HIGREEW – Deliverable Report

D2.5 – Single cell validated at lab scale

Deliverable No.	HIGREEW D2.5	
Related WP	2	
Deliverable Title	Single cell validated at lab scale	
Deliverable Date	2022-02-28	
Deliverable Type	DEMONSTRATOR	
Dissemination level	Confidential – member only (CO)	
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Reviewed by	Eduardo Sánchez (CICe)	24/02/2022
Approved by	Eduardo Sánchez (CICe)	24/02/2022
Status	Final	25/02/2022

Disclaimer/ Acknowledgment

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 875613. The information and views set out in this publication does not necessarily reflect the official opinion of the European Commission. Neither the European Union institutions and bodies nor any person acting on their behalf, may be held responsible for the use which may be made of the information contained therein.

Publishable summary

The goal of the HIGREEW project is to design, build, and demonstrate a prototype of a new high-energy density generation of aqueous organic redox flow battery based on a water-soluble low-cost organic electrolyte featuring low-cost components and long service life. To achieve this goal, every aspect of the battery from material selection to battery management system must be optimized.
The final selection of the active materials/components (felt, bipolar plate, membrane, electrolyte composition) made within WP2 needs to be tested in a single cell for a longer period and larger number of cycles. Such testing should validate a combination of materials as candidate for further scale up of the technology from laboratory single cell to pilot stack in WP3. Selected materials were incorporated to flow battery single cell with optimized felt compression and this. Demonstrator single cell was tested for more than 750 cycles. Results from cell testing shows sufficient performance and promising stability for further development of the technology.

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	Partner Full Name
1	CICe	CENTRO DE INVESTIGACION COOPERATIVA DE ENERGIAS ALTERNATIVAS FUNDACION, CIC ENERGIGUNE FUNDAZIOA
2	GAMESA	GAMESA ELECTRIC SOCIEDAD ANONIMA
3	UAM	UNIVERSIDAD AUTONOMA DE MADRID
4	CNRS	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS
5	C-TECH	C-TECH INNOVATION LIMITED
6	HEIGHTS	HEIGHTS (UK) Limited (Termination report ongoing)
7	UWB	ZAPADOCESKA UNIVERZITA V PLZNI
8	PFES	PINFLOW ENERGY STORAGE, S.R.O.
9	UNR	UNIRESEARCH BV
10	SGRE	SIEMENS GAMESA RENEWABLE ENERGY
11	FRAUNHOFER	FRAUNHOFER ICT

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