

HORIZON EUROPE PROGRAMME
TOPIC HORIZON-JTI-CLEANH2-2023-1
GA No. 101137802

ELECTROLIFE

Enhance knowledge on comprehensive electrolyzers technologies
degradation through modeling, testing and lifetime prevision,
toward industrial implementation



Deliverable report

D1.10 – Annual progress report M12

Deliverable No.	D1.10	
Related WP	WP1	
Deliverable Title	Annual progress report M12	
Deliverable Date	31.12.2024	
Deliverable Type	REPORT	
Dissemination level	Sensitive	
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Status	Final	

Document History

Version	Date	Editing done by	Remarks
V1	2024.12.04	Alessandro Hugo Videla Monteverde	Draft version 1
V2	2024.12.06	WP leaders	Final feedback
V3	2024.12.10	Alessandro Hugo Videla Monteverde	Final version for review
V4	2024.12.12	Daniele Consoli (EGP)	Review
V5	2024.12.14	Arjo Roersch van der Hoogte	Final version approval
V6	2024.12.15	Alessandro Hugo Videla Monteverde	Approval

Publishable summary

The ELECTROLIFE project aims to be a booster to enable the use of green hydrogen technologies to support decarbonization of European global industry. Currently, electrolysis technologies suffer from limitations in terms of cost, efficiency, stability, scalability, and recyclability. This is mainly due to the lack of understanding and identification of electrolyzer degradation mechanisms and improvement of current cell performance. In the next 5 years, ELECTROLIFE aims to increase the efficiency performance of electrolyzers by reducing the use of critical materials and extending the useful life of these systems. These goals will be achieved through test campaigns to identify multiple degradation mechanisms on multiple scales, multiphysics simulations with superimposed degradation mechanisms, prototyping of cells and stack components, and construction of dedicated test benches.

Deliverable 1.10 provides an extensive report on the annual progress of the ELECTROLIFE project in the first year of the project (M1-M12). Per work package the activities which have been undertaken and finalized are addressed and how these have resulted in the progress towards the achievement of the project objectives. Furthermore, the report provides a conclusion and recommendation for the second year and it gives an overview of all the submitted deliverables and the conferences, events and meetings all the partners have participated in as part of the ELECTROLIFE project. More information can be found in D1.9 Annual progress report which is a public document and available, both on the project website ([Project - ELECTROLIFE](#)) and the EC website cordis ([ELECTROLIFE - Clean Hydrogen Partnership](#)).

1 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	POLITO	Politecnico di Torino
2	UNR	Uniresearch B.V.
3	EGP	Enel Green Power SpA
4	FAU	Friedrich-Alexander-Universitaet Erlangen-Nuernberg
5	TUG	Graz University of Technology
6	KER	Kerionics s.l.
7	AAU	Aalborg University
8	FZJ	Forschungszentrum Jülich gmbh
9	ULille	University of Lille
10	STARGATE	Stargate Hydrogen Solutions OU
11	PF	Pietro Fiorentini s.p.a.
11.1	HYT	Hyter s.r.l. (Affiliated)
12	CNR	Consiglio Nazionale delle Ricerche
13	1s1	1s1 Energy Portugal Unipessoal Lda
14	AEA	AEA s.r.l.
15	VDX	Volytica diagnostics GmbH
16	SE	SolydEra SpA

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The project is supported by the Clean Hydrogen Partnership and its members.

The project has received funding from Clean Hydrogen Partnership Joint Undertaking under Grant Agreement No 101137802. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation programme, Hydrogen Europe and Hydrogen Europe Research.

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Clean Hydrogen Partnership. Neither the European Union nor the granting authority can be held responsible for them.