



# Deliverable Report

Plan for use and dissemination of  
foreground

**(D7.3)**

<http://pretzel-electrolyzer.eu/>

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Project 779478 - PRETZEL

Novel modular stack design for high pressure PEM water electrolyzer technology with wide operation range and reduced cost

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## Contents

Contents	4
Abbreviations and Indices	5
1 Summary	6
2 Introduction	6
3 Dissemination of the Project	6
3.1 Dissemination objectives	7
3.2 Dissemination strategies	7
3.3 Dissemination of results	8
4 Communication activities	8
5 PRETZEL identities	9
5.1 PRETZEL Logo	9
5.2 PRETZEL Templates	9
5.3 Popularization Channels	11
6 Impact evaluation	13
7 Dissemination rules	14
7.1 General rules	14
7.2 Visual Identity	15

## Abbreviations and Indices

Abbreviation	Explanation
GA	Grant Agreement
CA	Consortium Agreement
IPR	Intellectual Property
PEM	Proton Exchange Membrane
WP	Work Package
EU	European Union
SCR	Selective Catalytic Reaction
KPI	Key Performance Indicator
NGO	Non-Governmental Organization
SME	Small-Medium Enterprise

## 1 Summary

Dissemination, exploitation and communication activities play a key role within the PRETZEL project in order to foster impact, both within the duration of its FCH2-JU funded lifecycle as well as during its possible business oriented follow up.

The dissemination plan as part of D7.3 and D7.6, will define the objectives and strategy in order to make known the project overall. Major dissemination instruments will be the project website (D7.1) and the publication of a project fact sheet (D7.2 and further D7.4) and the publication of results in scientific journals, conferences and workshops, in addition to others means which the consortium approves. In such context, the project consortium will decide level, method and content of the dissemination activities in line with the GA and CA provisions, especially to protect IPR of the partners.

## 2 Introduction

This document is the deliverable D7.3 – Plan for use and dissemination of foreground - of the European project PRETZEL. The aim of this project addresses a strategic challenge towards the innovation and modernization: develop and realize a highly cost effective, efficient and long-term stable high-pressure PEM electrolyser system for energy storage via hydrogen production, especially from renewable energy sources.

Project results and activities will be popularized through a variety of different channels, and in different formats in order to reach the target groups as effectively as possible. The dissemination and communication plan will be set up to highlight the innovation and impact of PRETZEL on the European Union in particular with respect to the addressed societal challenges and specially to highlight the European added value of this innovative EU-project.

The WP7 will disseminate progress of the project and its results, following a plan that is structured as the present deliverable and will be updated at a later point in the project. This report is intended to be a guideline for dissemination activities planned in the PRETZEL project. Starting from a brief description of the project it addresses key elements of a dissemination strategy going through definition of its objectives and messages that PRETZEL would like to share with its audience.

The consortium will openly disseminate the project scope, research plan, scientific results and progresses of the project. Two dissemination approaches have been suggested, including achievements communication and attraction for new stakeholders available in appropriate form, for future exploitation of project results. These actions will allow non-participating organization in addition to industry and SMEs, policy makers, international organisation and others stakeholders to be adequately informed of the project's progress.

The scientific results and the progress of the technology will be presented at conferences and published in scientific journals without violating the IPR interest of the project consortium or individual partner in the consortium, as defined by rules in the GA and CA according to the confidentiality of some of the information.

## 3 Dissemination of the Project

A dissemination plan will be set up at the beginning of the project and updated continuously according to the progress in the project. The popularization strategy will be a roadmap for getting the PRETZEL messages across to the target audiences. This plan is to be seen as an essential tool of marketing and public relation management. The priority of the PRETZEL project is to make sure that the technology, resources and their assets reach to the target audience; in consequence, its diffusion will be focused not only on finding, but also understanding of PRETZEL through dissemination tools.

Communication needs to translate the science into a language and into messages that are understood by non-experts. Core elements will be the specification of the target audiences, key-

messages for these audiences as well as the selection of appropriate diffusion channels and tools. Another key objective of the PRETZEL dissemination activities is to ensure that all partners appropriately present and sufficiently communicate achieved results with the aim of optimising their value and facilitating future European adoption.

The communication department of the beneficiaries will support the communication activities. Each partner has therefore expressed a commitment to fully maximize their networks, contacts and capabilities for the effective dissemination of project results. Among others, articles in magazines, seminars with students and contributions to social media where appropriate, will be tools used for disclosure of information.

### 3.1 Dissemination objectives

The dissemination objective is to spread knowledge of the project through publications, tutorials and seminars. In this way, PRETZEL will obtain the attention and support not only of those who benefits from its assistive technologies, but also of those who are interested in the topic of electrolyser technology from the research facilities or industry.

The core in the PRETZEL dissemination strategy is organized around four actions as follows:

1. Improve the visibility of achieved results, disseminating PRETZEL project objectives and results that should lead to future business opportunities at the local level, in order to raise awareness, engage stakeholders and user necessary for business engagement.
2. Exploiting the consortium network of contact and participation at relevant events at the local, national and EU level to engage new public administrations interested in the adoption of the PRETZEL results.
3. Dissemination research activities results of the project targeting both research communities and approach and techniques developed may be of value.
4. Improving the partners own scientific and research profiles by attending events for such communities with the goal to generate new ideas, cross-disseminate to other fields of PA activities and other well expertise sharing.

### 3.2 Dissemination strategies

The main goals for dissemination activities involve stakeholders as well as research communities, public administration, companies and civil society (citizens, professionals and businesses). Both, dissemination strategies and objectives, help the PRETZEL consortium to choose stakeholders groups based on various levels of detail in order to best fit the project needs.

The aim of the dissemination plan is to fulfil following success criteria:

- Effective dissemination by usage of adequate tools/channels for each audience
- Compilation of information materials to be disseminated to the public via the internet
- Maximum use of existing free on-line material (newsletters, fact sheets)
- Coordination of publications in the scientific literature and at scientific conferences
- Unified brand of the PRETZEL project.

This requires the use of venues channels to present and promote the project, as well as different media and communication activities, as detailed in Table 1.

Table 1: Activities and objectives for present and promote the project.

Activities	Objectives
Website	To give an overview of the concept and the objectives of the project, the partnership and expected results, to host project, news and dissemination materials
Dissemination Materials	To spread the project's results to the targeted audiences
Presentations	To summarise findings from all areas of the project, to be used during main events on the topic
Newsletters	To announce and update on the major development and achievements of the project
Workshops/Conferences	To allow exchange of information with researchers and related projects, and dissemination of key lessons to relevant stakehold-

	ers, to share project findings with relevant stakeholders.
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### 3.3 Dissemination of results

A detailed dissemination plan of results plan will be created to ensure popularization during and after the project. The communication activities foreseen in PRETZEL will be focused and effective, so that the ideas of the project, its products and outcomes may be transmitted through the exchange of information on the project, while encouraging the respective targeted audiences to engage and react. The dissemination strategy will be prepared with the following target groups in mind exposed in Table 2.

Table 2: Dissemination strategy towards target groups

	Group	Aim/Key message	Relevant project communication activities	Communication channels
Primary target group	Users of the Electrolyser components: <ul style="list-style-type: none"> <li>· Producers of electrolysers</li> <li>· Producers of electrolysers components and materials</li> <li>· Customers interested in buying an electrolyser</li> </ul> Suppliers of electrochemical components beyond the electrolysis technology such as fuel cells, CO <sub>2</sub> reduction, Batteries, SCRs, chemical production methods	<ul style="list-style-type: none"> <li>· Technical properties of materials, components and systems</li> <li>· Costs and manufacturing processes</li> <li>· Parameters validation and efficiency increase potential</li> <li>· Requirements on high performance components</li> </ul>	Presentations, handouts, internet communications, scientific publication	National and European industry associations, magazines, website, workshops, symposia in conferences and relevant exhibition
Secondary target groups	Users or customers with similar material in another technological context such as mobility, aerospace, filter technology, hydraulic	<ul style="list-style-type: none"> <li>· Show the contributions of the expected material properties to other processes than electrolysis</li> <li>· Material validation</li> </ul>	Presentations, handouts, internet communication, scientific publication	Direct contact by partners, workshops and conferences, industry fairs and relevant exhibitions
Tertiary target groups	Scientific researchers	Demonstrate the achieved results and perspectives	Presentations, scientific publications	Conferences, journals, internet
	Interested public	Information about the progress and result of the project and the possible societal impact	Online-Blog	Website, articles in specialised media, press releases, social media

## 4 Communication activities

To be effective, dissemination needs a communication strategy. The PRETZEL popularization goal is to contact various targeted audiences and organizations with a recognisable, clear and effective message, which is able to communicate the project vision and achievements, as well as to stimulate the interest in the technologies and objectives into the project. To reach such a goal, the following actions have been identified:

- PRETZEL brand and dissemination material definition. An effective communication strategy requires the identification of a strong, appealing project identity, easily recognizable

and able to convey the main concepts and intentions of the project in an effective way. PRETZEL will define a project logo, and common layout for website, also will be kept up-to-date with news, links to social media, public deliverables, articles and material from participation at events (that is slides of presentations, keynote speeches, articles in journals and conference proceedings)

- Publishing the project updates, to allow the adequate information on PRETZEL vision, objectives and achievements. The non-confidential results will be made public via press releases, articles, and the official project website, as well as via partner websites in accordance with project policies.
- Presence of PRETZEL at important events. Consortium will actively promote the work at scientific public and industrial communities.
- PRETZEL publications, brochures and promotional materials. Partners will work both, at joint and individual levels to submit scientific papers, articles and other publications. The consortium will work tightly with the PR departments at each partner's institution to generate multilingual, if applicable, press releases and communication via other media.

## 5 PRETZEL identities

Common graphs in dissemination activities allows for a better recognition that helps to create a project identity in order to make it easier to identify the project brand. This visual identity, for instance, includes a logo and a colour scheme both for the website and for printed materials.

### 5.1 PRETZEL Logo

A logo has been already created and described in D.7.1 and proper templated prepared and shared with the partners. The Figure 1 presents the PRETZEL logo.



*PRETZEL Logo*

The logo features a direct linking to water in blue and its bubbling hydrolysis to hydrogen and oxygen, by using soft and harmonious patterns. Green relates with environmental friendly products. Name represents the electrolyser itself and its components.

### 5.2 PRETZEL Templates

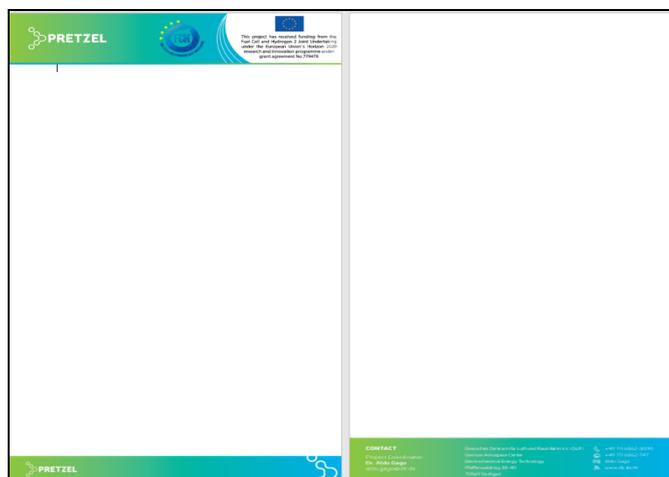
Common layouts for diffusion of PRETZEL activities (website, presentations, reports...) will be used to keep and uniform image. Word and Power Point templates will be uploaded to the private website for the partners to use in their internal (and towards the EU) reporting material and also for external presentations (conferences, etc.).



*PRETZEL template for a word document*



*PRETZEL template for a Power Point presentation*



*PRETZEL template for newsletter*

The official language of the PRETZEL project is English, thus, all the dissemination material generated by the project will be available in this language. However, if a project partner requires dissemination material in another language, they could fill into the templates *ad hoc* by themselves.

## 5.3 Popularization Channels

The progress and outcomes of the PRETZEL project will be disseminated in a variety of ways to ensure the maximum coverage and sharing of information, expertise and experience. All partners will be involved in knowledge transfer, in order to reach as large an audience as possible. A combination of communication methods will be used to reach out to relevant sectors, including politics, science, industry and public in general. Therefore, dissemination activities will be structured at the following levels:

- (i) Diffusion to scientific community
- (ii) Organization of workshops and conferences
- (iii) Dissemination to policy makers, NGO and public in general (website, social media, press releases and other events)
- (iv) Spreading to industry

### 5.3.1 Diffusion to the scientific community

#### **Congresses**

Scientific results will be disseminated at national and international conferences. Table 3 shows some of the tentative conferences where PRETZEL partners could present to the scientific community their most relevant results related to the project.

Table 3: Tentative events assistance by consortium

<b>Event description</b>	<b>Audience</b>	<b>Attendants</b>	<b>Involvement</b>
ICH2P-2019 10th INTERNATIONAL CONFERENCE ON HYDROGEN PRODUCTION May 15 – 17 2019, Cluj-Napoca, Romania	Scientific		Oral presentation
7th Regional Symposium on Electrochemistry of South East Europe, Split, Croatia, 27-30 May 2019	Scientific	200 - 300	Poster presentation
ICE 2019 2nd International Conference on Electrolysis 2019 Loen, Norway - June 9th to 13th 2019	Scientific & Industry		Oral presentation
Journées d'Electrochimie, Toulouse, 1-4 July 2019	Scientific	~ 300	Poster presentation
EFCF 2019 Low-Temperature Fuel Cells, Electrolysers &	Scientific		Oral presentation

H2 Processing Fundamentals and Engineering Design 23rd Conference in Series with Exhibition 2– 5 July 2019, Lucerne, Switzerland <a href="https://www.efcf.com/">https://www.efcf.com/</a>			
New trends and strategies in the chemistry of advanced materials with relevance in biological systems, techniques and environmental protection, Timisoara, 2019	Scientific		Poster presentation

### Scientific publications

It is expected to have at least one scientific publication per academic partner per year. Some of the journals in which the papers can be potentially published include: *Nature Energy*, *Science Advances*, *ACS Nano*, *Advanced Energy Materials*, *Nano Letters*, *Nanoscale*, *Journal of Power Sources*, *Journal of Physical Chemistry C*, *Journal of the Electrochemical Society*, *Electrochimica Acta*, *ACS Materials and Interfaces*, *ACS Energy Letters*, *Chemical Science*, *Physical Chemistry Chemical Physics*, *Physical Review Letters*, *Corrosion Science*, *Journal of Applied Electrochemistry*, *Journal of Solid State Electrochemistry*, *International Journal of Electrochemical Science and Engineering*. All of them are top-level peer-reviewed journals.

PRETZEL consortium will ensure that all the scientific publications resulting from the project will be granted Open Access. This will ensure that the results will be open to the scientific community and will reach the largest possible number of individuals.

### Others

PRETZEL project might also produce output in form of PhD and Master Thesis. Table 4 displays the foreseen output of PhD and Master Thesis by partner.

Table 4:

PRETZEL partner	Number of Master Thesis	Number of PhD Thesis
WHS	1	0

The IPR generated will be managed to ensure that any foreground is properly protected before any dissemination on those results is generated. The consortium agreement addresses the framework and procedures to be followed by the project partners which intention will be to maximize opportunities for effective collaboration and exploitation.

### 5.3.2 Organization of workshops and conferences

PRETZEL consortium will organise one open workshop to the wider scientific community to disseminate the project results and major findings by means of selected presentations and posters. In addition, one internal workshop restricted to the project partners and other participants by invitation to present and to discuss the progress on *in situ* diagnostics and monitoring of electrolyser performance.

### 5.3.3 Dissemination to the public in general, policy makers and NGO

#### **Website**

A PRETZEL website has been established at the beginning of the project (D7.1) into the WP7, which leads partner providing uninterruptedly maintenance and refinement during the project life. The project website is hosted at (<http://pretzel-electrolyzer.eu/>) and it also includes a private area to host all non-public deliverables and to be used for collaborative activities amongst consortium members within the project by partners and EC where all the necessary data, reporting templates, etc. will be uploaded.

This website acts as central information channel for the wider public, and the project participants and it will be periodically updating with the advances of PRETZEL according with each WP accomplishments. As a main channel for dissemination of the project and its progress, it works as a landing page for many of the communication action indicated at the present plan, since it to contain open sections such as project and consortium information, news and events, etc.

#### **Social media**

With more and more people joining social networks sites and using them regularly, the coverage is becoming unquestionable. Their use allows for reaching a wider public with audiences beyond the project's own community. Already, PRETZEL project has set up profiles in LinkedIn (<https://www.linkedin.com/in/pretzel-electrolyzer-pemel-747522167/>) and twitter (<https://twitter.com/PElectrolyzer>), where will be include announcements to the public will be included in general of project meetings, attendance of the partners to workshops and conferences, news and any announcements, press releases and events which could be potentially relevant to the development of the PRETZEL project.

#### **Others events, newsletters and press releases**

The PRETZEL consortium will produce a newsletter in electronic format each semester in English language, although National Language translation of each e-Newsletter shall be performed by the partners if relevant. The e-Newsletter will be posted in the project website and all publications could be downloaded from there.

Press release helps to get a valuable publicity for spreading everywhere message by boosting its visibility. The consortium is planning to publish press releases information for important achievements and/or different actions along the course of the project, which will be focused on the completion of major milestones as well as by the end of the project.

Furthermore, the members of the consortium plan to participate in science fairs and events to bring researchers closer to the public and increase awareness of research and innovation activities about electrolysers and, specifically about the development of the PRETZEL electrolyser. Departments of consortium partner's also have a team dedicated for the promotion and dissemination of achievements of the PRETZEL project.

### 5.3.4 Spreading to industry

Without prejudice that the actions outlined in 5.3.2 and 5.3.3, the consortium will also contribute to the communication of the PRETZEL project results to stakeholders from industry, and more specific and proactive actions are planned to ensure that broad industry awareness and support are achieved. The participation of industrial partners of the project in industry/technology fairs or participation on hydrogen networks, are examples with the aim to obtain specific dissemination and collaboration with key industrial partners.

## 6 Impact evaluation

Dissemination is not a one-time activity; rather it is a long-term relationship that will provide ongoing feedback to help the project consortium to improve its message. Evaluating the success of

dissemination and communication efforts is an iterative process. Once the project PRETZEL project has begun the process of popularization, it will be interesting to assess the effect that the diffusion strategies have on getting the project message.

Table 5 shows a summary of the principal KPIs to evaluate the results of the dissemination plan and their impact on the different audiences.

Table 5

Channel	Implementation	Result indicators	Impact indicators	Target group
Website	Public/private area Download section Data bases	Qty of users/visits Numbers of downloaded docs Numbers of pages visited	Knowing how much traffic a website helps to validate the website content	All target groups
Social media	Open profiles	Qty of followers	Social networks have become powerful marketing and communication tools	All target groups
Seminars, conferences, fairs, workshops	Number of events organized Number of events attended	Qty of responses to invitations Qty of attendees	Presents an opportunity to discuss PRETZEL project and provides an important channel for exchange information Attendance is a good indicator to assess the success of events	All target groups
Newsletters	Numbers of published newsletters	Numbers of down loadings Numbers of open rate	The open rate for an email campaign is a measure of how many recipients viewed one's own email	All target groups
Publications	Number of publications	Impact factor of the journal Qty of citations	Impact factor indicate the quality of researches publications	Scientific public
Press releases	Number of press releases	Qty of press releases issued	To measure the effectiveness, the knowing of how many media and people have echoed the distributed news and, consequently the generated impact	All target groups

## 7 Dissemination rules

There are some general rules that the dissemination activities must follow, according to the EU regulations and the Grant Agreement. They are the following:

### 7.1 General rules

- Obligation to disseminate the results:** According to article 29.1 of the GA: "Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — 'disseminate' its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium)".
- Obligation to inform the other partners:** according to article 29.1 of GA: "A beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate".

## 7.2 Visual Identity

**Visibility of EU funding:** unless the JU requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must:

- (a) Display the JU logo;



JU logo

- (b) display the EU emblem and



EU emblem

- (c) include the following text:

**“This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under the European Union’s Horizon 2020 research and innovation programme under grant agreement No 779478”.**

When displayed together with other logos, the JU logo and the EU emblem must have appropriate prominence.

Finally, and according to article 29.5 of GA, “any dissemination of results must indicate that it reflects only the author’s view and that the JU is not responsible for any use that may be made of the information it contains”.