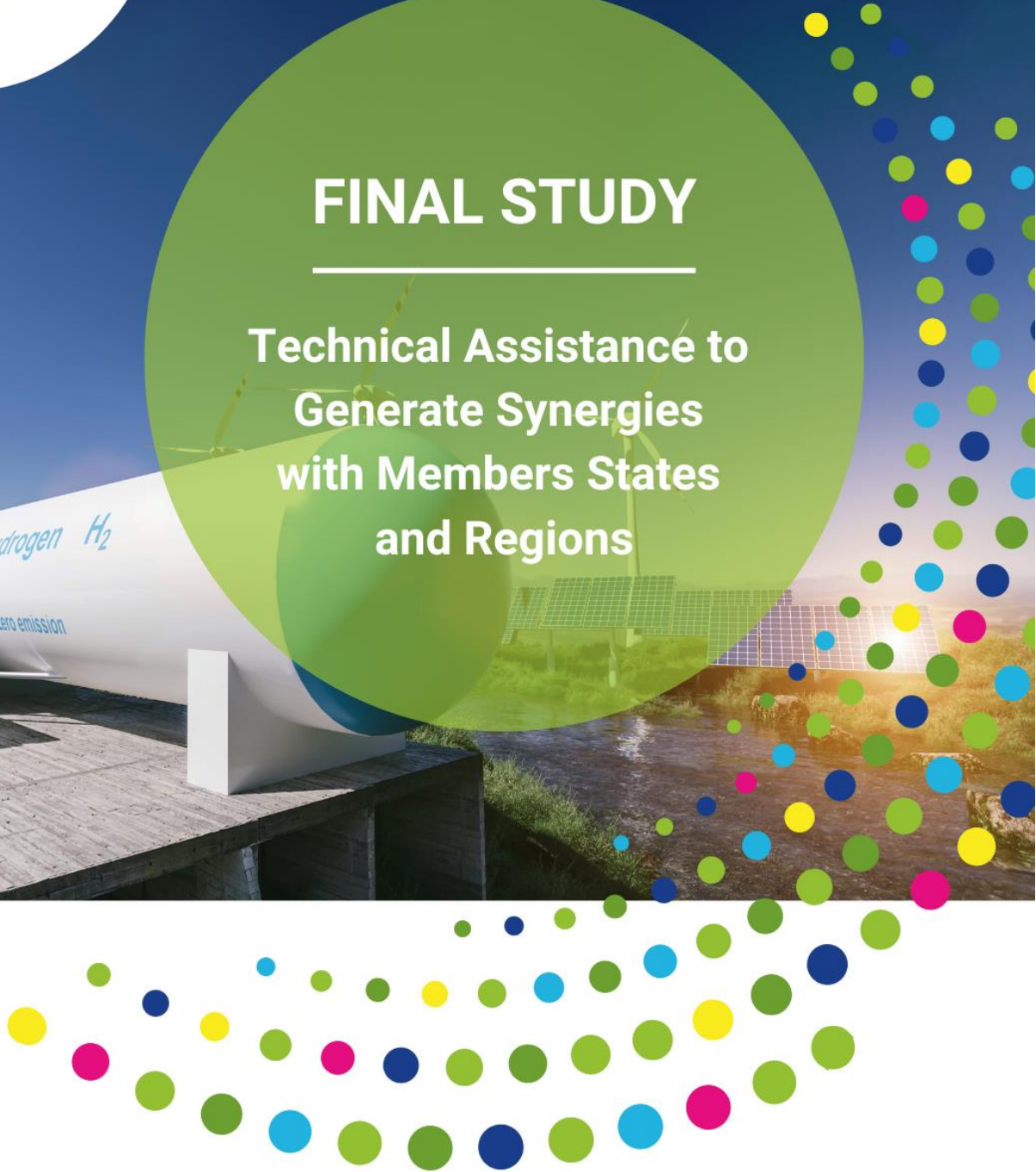




Clean Hydrogen Partnership

FINAL STUDY

Technical Assistance to
Generate Synergies
with Members States
and Regions



Clean Hydrogen Partnership

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Executive Summary

The “Technical Assistance to Generate Synergies with Members States and Regions” ran from January 2023 until June 2024.

It successfully supported the Clean Hydrogen Partnership in finalising 10 Memoranda of Cooperation (MoCs) with National and Regional Managing Authorities (MAs).

On the basis of a thorough **assessment of various policy and funding initiatives**, an initial framework was developed to identify gaps and potential for synergies between national and/or local hydrogen strategies with the current Clean Hydrogen Partnership Strategic Research and Innovation Agenda. This analysis entailed both a thorough **literature review**, as well as the preparation of **tailor-made surveys** for the selected countries (EU-27, as well as of the HE associated countries with representatives in the Clean Hydrogen Joint Undertaking State Representatives Group, namely Norway, Iceland, Turkey, Israel and Georgia. Moldova was finally not included in the analysis, since no contacts are available in the SRG. The UK was not included either, since it had not yet signed an HE association agreement at the time of preparing the report in October 2023).

The Authorities signing the MoCs were selected through a tailored Call for Expression of Interest (EoI). The EoI was developed, initially, through setting a sound framework for the Call by defining the target group, eligibility, evaluation criteria, selection methodology, EoI process supporting materials and dissemination plan. Crucially, the evaluation criteria were defined to aid in distilling the Authorities displaying the highest potential **impact** on the initiative, **engagement** on the H2 field, **commitment** to relevant activities and **willingness** to participate in the initiative. After laying a solid basis, the Call was launched and widely disseminated, being open from June to July 2023. Overall, in this period, 21 eligible EoIs were received from a diverse range of regions and national authorities from within the EU and Associated Countries. Applying the selection methodology and validating the final choice, a final group of 10 Regional and National Managing Authorities was selected to develop concrete cooperation and work streams with the Partnership, facilitated by the creation and signing of MoCs.

The MoCs were developed based on **continuous engagement** with the selected MAs and the JU throughout the project. They describe the **support services** that these MAs will receive from the Partnership to advance the uptake of hydrogen technologies in their regions and countries. These **areas of cooperation** were identified based on a preliminary analysis of the available national and regional hydrogen strategies and the identification of these MAs’ **needs and gaps**. **Three MoCs** were **signed** during a ceremony at the Hydrogen Valleys Days, on 17th June 2024 in Brussels, while another **seven have been finalised and are ready for signature**. A ceremony for the official signing of the remaining seven MoCs is expected to take place during the European Hydrogen Week that will be held between the 18th and 22nd of November 2024.

Introduction

The “Technical Assistance to Generate Synergies with Members States and Regions” started at the beginning of 2023 to support the Clean Hydrogen (Clean H₂) Partnership to identify National and Regional Managing Authorities (MAs) willing to cooperate with the Partnership to strengthen and foster activities to support the development of hydrogen technologies.

To this effect, three main Tasks were designed and implemented over one and a half years:

- *Task 1- Assessment of various policy and funding initiatives to identify gaps and potential for synergies.*
- *Task 2- Preparation and launch of a Call for Expression of Interest.*
- *Task 3- Structure the cooperation to generate synergies between at least 10 MAs and the Clean Hydrogen Partnership.*

1. Objectives

The tender focused on the achievement of the following overall objectives:

- Analysing the state-of-play of hydrogen development in Member States/ Regions (and Associated Countries) by inventorying of national initiatives/ strategies/ roadmaps.
- Selecting at least 10 Managing Authorities from EU Member States, Regions, or Associated Countries, of which half from the EU 13 Member States (i.e. the Member States who joined the EU since the 2004 expansion).
- Proposing and creating commitments for funding synergies, mainly co-funding and/or transfer of resources under shared management (i.e. ERDF) from regional/national funding schemes managed by the selected Regional/National Authorities to the Clean Hydrogen Partnership’s Programme through MoCs.
- Proposing and creating commitments for other types of synergies between the JU and the selected National/Regional MAs relevant to the areas of Knowledge Management and Capacity Building (e.g. promoting knowledge exchange on specific areas of interest for the MAs, facilitating networking with other similar organisations as well as experts in hydrogen R&I).
- Creating further awareness and interest in the Clean Hydrogen Partnership’s activities among National/Regional MAs with a view to future collaboration.

2. Performed activities

The activities performed by the project were interconnected and sequential:

- The **first activity** focused on collecting relevant information related to national and/or regional hydrogen strategies with a view to identifying areas of existing gaps and potential synergies between the countries/regions and the Partnership. It, therefore, prepared the theoretical basis for further analysis, while supporting the identification of relevant criteria for the evaluation of the Regional/National Managing Authorities (MAs) submitting an EoI, as part of the following activity.
- Once the theoretical background was set, the **second activity** focused on launching online and widely disseminating [a Call for expression of Interest \(EoI\)](#) to attract National and Regional MAs willing and ready to strengthen their cooperation with the Partnership, by receiving structured Technical Assistance.
- After closing the Call, an evaluation methodology based on the criteria of impact, engagement, commitment, willingness and readiness of the applicants as well as the need for geographical balance was applied. Resulting in a final selection of authorities: 1. Programme Office North Sea Canal Area (Netherlands), 2. Wielkopolska Region (Poland), 3. Friuli Venezia Giulia Region (Italy), 4. Kosice Region (Slovakia), 5. Intermunicipal Community of Medio Tejo (Portugal), 6. Regional Public Body of Energy – Castilla y Leon (Spain), 7. Scientific and Technological Research Council of Türkiye (Türkiye), 8. Slovenian Ministry of the Environment, Climate and Energy (Slovenia), 9. Croatian Hydrocarbon Agency (Croatia), 10. Bulgarian Ministry of Innovation and Growth (Bulgaria).
- Finally, the **last activity** aimed at the set-up of a structured cooperation mechanism between the selected Regional/National MAs and the JU, in the form of an MoC aiming at fostering synergies in three focus areas namely i) Knowledge Management, ii) Capacity building and iii) Programme Management, Funding and Financing. Based on this, the MoC template was developed, considering:
 - the areas of synergies identified during the collection and review of national/regional H₂ strategies during the project's first activity.
 - the needs of the selected MAs, identified through the submitted EoIs in the second activity.
 - the concrete needs and gaps identified through engagement with these MAs (e.g. via semi-structured interviews, exchange of e-mails and meetings for clarifying and completing information) during the third activity.
 - the JU's remit, based on consecutive feedback loops between the contractor and the JU to select the MAs' needs that fall within the JU's scope of activities during the third activity.

The MoC template was drafted based on the development of standardised content reflecting the identified common needs of the selected MAs, while allowing for some degree of customisation to account for the particular needs expressed by each MA and ensuring compliance of those needs with the JU's remit described in its [Strategic Research and Innovation Agenda 2021 – 2027](#).

- This structured process resulted in the signing of three MoCs (i.e. with the Croatian Hydrocarbon Agency, the Bulgarian Ministry of Innovation and Growth and the Friuli Venezia Giulia Region) during the [Hydrogen Valleys Days event](#) held on the 17th of June in Brussels and the approval of the remaining seven MoCs which are expected to be signed during the [European Hydrogen Week](#) that will take place between 18th and 22 of November 2024.

3. Lessons learnt

The following insights were gained from the execution of the project's activities:

- Regular information exchange between the JU and the Regional/National MAs is paramount to devise common strategies and explore cooperation opportunities for advancing hydrogen R&I.
- The identification of Regional/National MAs' needs and areas of interest for cooperation is an essential step for the creation of an effective and meaningful cooperation mechanism such as MoC.
- Calls for Expression of Interest are an effective way for the Clean Hydrogen JU to gather applications for technical assistance projects, as they facilitate reaching a high number of potential beneficiaries. Moreover, EoIs allow efficient gathering of key data, thus helping the creation of a support offer tailored to the needs and priorities of stakeholders.
- Thematic expertise is crucial for the team designing an evaluation methodology and format for EoI submission for a competitive call. This expertise is necessary to establish comprehensive questionnaires and prompts that can capture all necessary contextual and specific information. Furthermore, thematic expertise is necessary to define fit-for-purpose evaluation criteria, especially in technical fields such as the hydrogen sector, allowing for a fair selection aligned with the project's objectives.
- Sharing of thematically relevant networks and contacts by European Commission Directorates assisted the effective dissemination of the Call for Expressions of Interest toward various relevant stakeholders and potentially interested actors across the EU, that would otherwise be difficult to reach.
- There is great interest and commitment from the Regional/National MAs to cooperate with the Clean Hydrogen JU and explore various types of synergies to the benefit of

their stakeholder ecosystems in the areas of knowledge management, capacity building and funding and financing. There is a lot of interest in:

- knowledge exchange covering all relevant areas (e.g. hydrogen plans and projects, hydrogen ecosystems, hydrogen-related policy and regulatory frameworks, hydrogen-related certifications and standards, business models and innovative procedures and solutions developed and implemented at regional and national levels). The Regional/National MAs wish to learn more from each other to potentially replicate successful practices.
- building capacity, skills and attracting talent. The need is very wide-ranging from basic capacity (e.g. project design and management) to advanced technical capacity (operation of hydrogen technologies)
- exploring and materialising synergies between national/regional and EU funding programmes and financial support mechanisms, in particular by i) providing regional/national funding support to proposals awarded with the Seals of Excellence under Clean Hydrogen JU calls, ii) by potentially combining national/regional funds (e.g. Just Transition Fund, European Regional Development Fund, Recovery and Resilience Facility) with JU (Horizon Europe) funds and iii) by transferring resources under shared management managed by the Regional/National Authorities to the Clean Hydrogen JU Programme.
- The triangulation of Regional/National MAs' needs, gaps and focus areas of cooperation as well as JU's remit can help the JU structure an efficient support offer and develop a beneficial cooperation mechanism such a MoC for both parties in order to promote hydrogen uptake and development in Europe. Additionally, it can provide valuable insights for other relevant EU services with competencies in the identified focus areas.
- The MoC review process is quite lengthy and requires time from both sides. Regional/National MAs have their own internal organisational and procedural requirements with which they need to comply for the approval of such documents (i.e. policy review, legal review, approval by regional government in the case of Regional MAs or a national ministry in the case of National MAs).
- Greater flexibility in the elaboration, review and approval procedures of the MoCs is essential.
 - There is a need to make room for greater customisation of MoCs in the future. This was explicitly desired by the selected Regional/National MAs.
 - Greater flexibility and effectiveness in the Clean Hydrogen JU's internal review and decision-making processes are crucial to maintain and even increase the MAs' engagement and commitment.

4. Conclusions

This section presents the conclusions derived from the activities and collaborative efforts undertaken throughout this project, summarising the key findings and achievements.

- There is a great need and interest in promoting cooperation, networking, and exchange of best practices between the Clean Hydrogen JU and Regional/National MAs, as well as among Regional/National MAs in hydrogen R&I areas. The Clean Hydrogen JU should enhance and further promote its role as a facilitator of such synergies.
- Both Regional/National MAs and the JU wish to regularly exchange information and data relevant to the hydrogen sector at regional, national and EU levels. There is room for this information exchange to take place in a standardised manner and complement the information collection and reporting activities of the JU's governing bodies such as the Stakeholder Representatives Group (SRG) and Stakeholders Group (SG).
- Launching of a call for Expressions of Interest (Eols), based on a sound methodology and accompanied by carefully designed supporting materials, was a successful way to select the most appropriate national and/or regional MAs showcasing significant potential to develop structured synergies with the Clean H2 Partnership. It generated broad interest collecting 21 Eols from 15 countries, which were inducted into an evaluation process resulting in a final selection of 6 regional and 4 national actors, with half originating from the EU-13 and 1 from a Horizon Europe-associated country. These showcased the Partnership's multi-level approach to hydrogen development and its intention to generate impact across a range of contexts and maturity levels.
- Initiatives that require an outreach to a high number of authorities across countries and regions, such as the launching of calls for Eols, can benefit greatly from collaboration between different European Commission services, who have access to networks involving national/regional authorities.
- The Clean Hydrogen JU has managed to support a wide range of national and regional actors at both more and less advanced stages of hydrogen development. Yet there is still a significant number of actors that demonstrate willingness to accelerate their hydrogen ecosystems and be included in JU initiatives but have not yet managed to do so.
- Regional/National MAs are open to exploring and realising funding synergies between their own funding programmes and the JU Work Programme (funded by Horizon Europe). However, complex administrative procedures and red tape generally hinder their efforts in materialising synergies between regional/national funding programmes and EU ones.

- The needs and challenges facing Regional/National MAs for developing and adopting hydrogen technologies in their territories are wide-ranging and can be summarised as follows:
 - Support and synergies across all TRLs from basic R&I to full deployment.
 - Financing (& investment).
 - Technical & non-technical expertise and skills.
 - Policy and legal frameworks (national and cross-border).
 - Infrastructure development.
 - Increase demand for hydrogen.

While some of these needs extend beyond the remit of the Clean Hydrogen JU, it is crucial for the JU and European Commission services to fully understand them to support the development and uptake of hydrogen technologies at both regional and national levels. Technical, financial, and legal support, along with synergies and cooperation with the JU and other European Commission services can help Regional/National MAs advance their efforts, policies, projects, and initiatives in this area. Therefore, a coordinated approach between the JU and the relevant European Commission services for the provision of support to European regions aimed at enhancing their capacities for hydrogen R&I, is considered essential.

- The MoC is considered an effective structured cooperation mechanism between the JU and the MAs. Three MoCs were signed between three Regional/National MAs and the JU during a ceremony at the Hydrogen Valleys Days, on 17th June 2024 in Brussels, while another seven were finalised and prepared for signature. A ceremony for the official signing of the remaining seven MoCs is expected to take place during the European Hydrogen Week that will be held between the 18th and 22nd of November 2024. This achievement underscores the significance and relevance of the MoCs for both the JU and the MAs, highlighting their commitment to advancing hydrogen development initiatives. Moreover, such initiatives can spur further interest among other National/Regional MAs to cooperate with the Clean Hydrogen JU.
- The Regional/National MAs selected in this project can serve as exemplary cases of technical assistance services provided by the Clean Hydrogen JU and as references for the provision of similar services to other National/Regional MAs.

5. Recommendations

Based on the lessons learnt and conclusions stemming from the work carried out in the project, the Consortium is making a number of recommendations to the JU with the aim of improving the development of future technical assistance and cooperation mechanisms with other Regional/National MAs across Europe:

- Information should be regularly exchanged between the Clean Hydrogen JU and Regional/National MAs regarding their projects and initiatives, stakeholder ecosystems, national/regional policy frameworks, and funding programmes relevant to hydrogen R&I. It is recommended that the procedure for this information collection is standardised. Moreover, access to this information should be provided to other Regional/National MAs and the JU's governing bodies (namely the SRG and the SG) via an online platform or website that will allow for easy access and use. This platform should also include a collaborative space for interested MAs to discuss and set up further collaboration.
- The creation of networks and fora for Regional/National MAs to share experiences, best practices, and collaborate on joint initiatives should be further promoted and supported.
- It is advisable that a form of contact (in the form of a newsletter or mailing list) is kept with Hydrogen managing authorities that have already engaged with the Clean Hydrogen JU. Additionally, it is advisable that the Partnership continues to provide incentives for participation towards new authorities with less-developed hydrogen ecosystems, either through geographical balance provisions within projects, or via specifically dedicated projects.
- When a call for expression of interest is foreseen in a project, a maximum level of thematic expertise should be mobilised during the design stage of the evaluation methodology and EoI process. It is advisable that significant time and resources are dedicated to this stage in order to ensure that the call mobilises broad interest and facilitates the selection of the most appropriate beneficiaries.
- For the dissemination of an open call inviting competitive applications for a technical assistance initiative, it is suggested that thematically relevant networks are collaboratively identified by European Commission bodies to ensure necessary reach and minimise time constraints.
- In developing similar initiatives with a call for applicants to receive technical assistance, it is advisable that a description of the specific services or at least concrete examples of the potential technical assistance forms are provided, in order to mobilise maximum interest and reduce administrative workload in answering clarification queries.
- It is advisable that the beneficiary Authorities of this project should serve as 'lighthouse' cases, to communicate their experience and disseminate examples of the types of technical assistance services provided by the Partnership. Potential future Calls for EoI could provide links to case studies and statements by these beneficiaries to further tailor the value offer and bolster interest.
- The development of cooperation mechanisms between the Clean Hydrogen JU and Regional/National MAs should be based on holistic needs assessment of each MA's

unique context. The insights gained from engaging with Regional/National MAs should be used to tailor the cooperation mechanism and support services provided by the Clean Hydrogen JU.

- Realistic timelines should be set for the review and approval of MoCs taking into consideration the internal organisational processes and requirements of both Regional/National MAs and the JU.
- Greater flexibility in the content and structure of the MoCs should be foreseen, in line with the different needs and legal requirements of the MAs.
- Open dialogue with the MAs during the MoC elaboration process should be encouraged to ensure that the final MoCs are practical and beneficial for all parties involved.
- Clear communication and support should be provided to Regional/National MAs throughout the MoC review process to ensure all necessary consultations and approvals are obtained efficiently and in a timely manner.
- Discussions and collaborations between Regional/National MAs and the JU should be facilitated to streamline funding synergies.
- A monitoring tool should be created to help the JU track the implementation progress of the MoCs.
- The comprehensive needs of Regional and National MAs should be communicated to other European Commission services. Such information can serve as a basis for potential/future mechanisms, tools and programmes that could be improved/developed in response to those needs.

ANNEX

MoC Template

**MEMORANDUM OF COOPERATION
BETWEEN
THE CLEAN HYDROGEN JOINT UNDERTAKING
AND
[NAME OF THE MANAGING AUTHORITY]**

1. The **Clean Hydrogen Joint Undertaking**, hereinafter referred to as **Clean Hydrogen JU**, represented for the purposes of signing this Memorandum of Cooperation (MoC) by Mr/Mrs [name, function].

And

2. The **Managing Authority** [official/legal name of the MA] hereinafter referred to as **Managing Authority or as MA**, represented for the purposes of signing this MoC by Mr/Mrs [name, function].

hereinafter referred to individually as "Party" and collectively as "Parties"

HAVING REGARD TO:

- The European Hydrogen Strategy¹;
- The RePower EU Plan²;
- Regulation (EU) No. 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe³ – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No. 1290/2013 and (EU) No. 1291/2013 ("HE") and in particular, on synergies, recitals 33, 34, 43, 68 and Articles 6, 7 and Annexes III and IV;
- Communication from the European Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the revision of the Strategic Energy Technology (SET) Plan and in particular, on synergies, section 4 "Governance, monitoring and reporting"⁴ and on skills, section 3: "cross-cutting issues";

¹ COM (2020) 301 final, Brussels, 8.7.2020. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'A hydrogen strategy for a climate-neutral Europe'

² COM (2022) 230 final, Brussels, 18.5.2022. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'RePowerEU plan'

³ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0301>

⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023DC0634&qid=1698315020718>

- Council Regulation 2021/2085 of 19 November 2021 (“Single Basic Act”) establishing the Joint Undertakings under Horizon Europe⁵ and in particular, on synergies, recitals 10, 11, 12, 14, 31, and Articles 4, 5 paragraph 2 letter c), and 83;
- The Clean Hydrogen JU Strategic Research and Innovation Agenda (SRIA) 2021-2027⁶ and the Clean Hydrogen JU Annual Work Programme (“AWP”) 2024⁷;
- The European Commission Notice on Synergies between Horizon Europe and European Regional Development Fund (“ERDF”) programmes⁸;
- Regulation (EU) No. 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and on the Cohesion Fund, in particular, Articles from 2 to 6⁹;
- National/Regional ERDF “Operational Programme” adopted by the Commission on [Name, date of adoption and link];
- [National/Regional Smart Specialisation Strategy adopted by the Region/Member State on [date of adoption];
- [add reference to other legal basis relevant for this MoC];

WHEREAS:

Due to its multiple possible uses, clean or renewable hydrogen is expected to play a key role in a future climate-neutral economy, enabling the decarbonisation of the energy and transport sectors as well as of industrial processes when clean hydrogen is used as a feedstock. Hydrogen also allows the large integration of renewable power generation in the energy system due to its ability to offer long term storage of renewable energy.

⁵ Council Regulation (EU) 2021/2085 of 19 November 2021 establishing the Joint Undertakings under Horizon Europe and repealing Regulations (EC) No 219/2007, (EU) No 557/2014, (EU) No 558/2014, (EU) No 559/2014, (EU) No 560/2014, (EU) No 561/2014 and (EU) No 642/2014, see here: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R2085&qid=1678954616013&from=en> OJ L 427, 30.11.2021, p 17-119

⁶ https://www.clean-hydrogen.europa.eu/about-us/key-documents/strategic-research-and-innovation-agenda_en#modal

⁷ https://www.clean-hydrogen.europa.eu/system/files/2024-01/Clean%20Hydrogen%20JU%20AWP%202024%20-%20all%20chapters_Final_For_Publication.pdf

⁸ Commission notice on synergies between Horizon Europe and ERDF programmes (2022/c 421/03) [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022XC1104\(02\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022XC1104(02)&from=EN)

⁹ Regulation (EU) 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and on the Cohesion Fund <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1058>

The EU Hydrogen Strategy stresses the need to accelerate the development of clean hydrogen so that it becomes part of the EU's energy supply by 2050. It also mentions that all actors, public and private, at European national and regional levels, must work together, across the entire value chain, to build a dynamic hydrogen ecosystem in Europe.

Research & Innovation (“R&I”) is a priority for the programming of European Funds 2021-2027¹⁰.

The European Commission Communication on the revision of the Strategic Energy Technology (SET) Plan specifies that Member States should include national objectives stemming from the SET Plan, as well as R&I activities, in their national energy and climate plans (NECPs), including exploring synergies between other relevant national funds and activities.

The Clean Hydrogen JU is a unique European public private partnership supporting research and innovation (R&I) activities in hydrogen technologies in Europe aiming to accelerate the development and improvement of advanced clean hydrogen applications across Europe. To this end, the EU will support the Clean Hydrogen JU with €1 billion euro for the period 2021-2027, complemented by at least an equivalent amount of private investment (from the private members of the partnership), raising the total budget to above €2 billion euro. In addition, the European Commission in its communication “REPowerEU Plan” announced an additional investment of EUR 200 million available for the Clean Hydrogen JU for doubling the Hydrogen Valleys in the EU by 2025”.

The Single Basic Act requires the Clean Hydrogen JU to develop close collaboration and synergies both at Union, national and regional level. Moreover, Article 5.2 (c) requires the Clean Hydrogen JU to seek and maximise synergies and where appropriate, possibilities for additional funding from relevant activities and programmes at Union, national and regional levels, in particular, with those supporting the deployment and uptake of innovative solutions, training, education and regional development, such as Cohesion Policy Funds or the national Recovery and Resilience Plans. In doing so, as per Article 20.7 (c) the Clean Hydrogen JU may consult the States’ Representatives Group which can provide information on links to Horizon Europe and other Union, national and, where relevant, regional initiatives, including cohesion policy funds in line with smart specialisation strategies.

The European Commission Notice on Synergies between the Horizon Europe (HE) and European Regional and Development Funds (ERDF) programmes underscores the importance of synergies between the R&I framework and cohesion programmes in maximising investments in research and innovation by aligning strategic plans and

¹⁰https://ec.europa.eu/regional_policy/funding/available-budget_en

leveraging diverse funding streams. HE and ERDF in particular, are pivotal EU instruments for advancing innovative, smart, and sustainable economic transformation and fostering excellence in research and innovation, while addressing the persistent innovation divide among Member States. Promoting an integrated approach and strengthening synergies between these key EU instruments and their respective pillars and policy objectives can offer new win-win situations benefiting all stakeholders.

The Clean Hydrogen JU Strategic Research and Innovation Agenda (SRIA) 2021-2027¹¹ highlights that further efforts in Research and Innovation into breakthrough technologies are needed to ensure a full hydrogen supply chain that will serve the European economy. It also stresses the need to reinforce synergies among European actions and funding instruments to pull together resources, align priorities and ultimately maximise the impact of clean hydrogen R&I investments, therefore contributing to closing the innovation gap in Europe¹².

The MA has a decisive role to play in the development of a hydrogen economy. By investing in the clean hydrogen sector, the MA can support the transition to a green economy, boost innovation, stay competitive in the future, stimulate economic growth and create new jobs. In particular, its detailed knowledge of local circumstances, of public procurement and of various national and regional funding and incentive opportunities, connections with local players and with actors in vocational and academic education and training, as well as supervision of planning and authorisation processes uniquely position the MA to drive market development. However, the MA needs to optimise the use of its resources to materialise projects in fuel cell and hydrogen (FCH) technologies. Access to technical and legal information and expertise in the field of hydrogen is therefore necessary to achieve this.

The MA acknowledges the role of hydrogen as a relevant energy vector to decarbonise the regional/national economy and support economic development. To facilitate clean hydrogen-related research and innovation activities within and across its territory, the MA will leverage the following programmes:

- [list the programme and funds (European funds - including Next-Gen EU-/National/Regional) managed by the MA which are relevant to the implementation of the MoC]

¹¹ https://www.clean-hydrogen.europa.eu/about-us/key-documents/strategic-research-and-innovation-agenda_en#modal

¹² See in particular section 4.1 "Interface with EU policies and other programmes (Synergies)" of the Clean Hydrogen JU Strategic Research and Innovation Agenda ("SRIA") 2021-2027 - <https://www.clean-hydrogen.europa.eu/system/files/2022-02/Clean%20Hydrogen%20JU%20SRIA%20-%20approved%20by%20GB%20-%20clean%20for%20publication%20%28ID%2013246486%29.pdf>

The Parties wish to strengthen their cooperation and coordination in support of research and innovation in the field of clean hydrogen solutions. In this regard, the parties welcome the set-up of a cooperation mechanism aimed at facilitating dialogue and promoting the exchange of knowledge and experience, including valuable expertise, best practices and lessons learnt throughout the entire hydrogen value chain, as well as at fostering collaboration for hydrogen research and innovation projects, facilitating access to state-of-the-art technology advancements and encouraging different types of funding synergies for clean hydrogen-related research and innovation activities.

Have agreed as follows:

ARTICLE 1 – PURPOSE

1.1 This Memorandum of Cooperation (MoC) aims to establish a cooperation channel to foster and facilitate synergies between the Parties in the areas of research and innovation and exploitation of results on clean hydrogen technologies.

ARTICLE 2 – SCOPE AND CORE AREAS OF COOPERATION

2.1 The parties agree to create by means of the present Memorandum a cooperation mechanism, as a vehicle for generating synergies and in particular in relation to knowledge management, capacity building as well as programme management and funding and financing.

2.2 With respect to **knowledge management**, the Parties propose to develop a two-way collaboration approach in the collection, exchange and dissemination of information and data, supporting among others the role of the Clean Hydrogen JU as a knowledge hub for hydrogen and an enhancer of synergies between EU, national and regional funds regarding clean hydrogen research leading to value chains creation and deployment in Europe. Within this context, cooperation between the Parties could encompass activities such as the ones described in Annex 1, Part A.

2.3 With respect to **capacity building**, the Parties propose to cooperate in the activities described in Annex 1, Part B.

2.4. With respect to **programme management, funding and financing**, the Parties propose to initiate a process of exchange of information and establishing a good and structured coordination between different funding schemes. Such information exchange and cooperation will cover the aspects described in Annex 1, Part C.

ARTICLE 3 – GOVERNANCE AND IMPLEMENTATION

3.1 This MoC will be implemented by mutual agreement.

3.2 The Parties will ensure the protection of any sensitive information and the confidentiality of any document and information related to the parties or the participants to technical activities (if any).

3.3 This MoC will be coordinated by one Point of contact for each Party. Each Party will identify Points of Contact (PoC) who will perform the coordination activities on each side.

3.4 Further aspects of the cooperation between the Parties, as well as working methods under this MoC, may be developed and agreed between the Parties.

ARTICLE 4 – CONFIDENTIALITY

4.1 The Parties agree that no intellectual property rights (IPR) are expected to be created throughout their cooperation. However, pre-existing IPR should be considered and respected by the Parties in their exchange of data, know-how, information, or materials needed for the realisation of the objectives and activities included in this MoC.

4.2 Each Party agrees to ensure the proper use and protection of any information that is marked as sensitive or confidential and is shared by the other Party throughout their cooperation.

ARTICLE 5 – NON-BINDING NATURE

5.1 The present MoC is a statement of intent with non-binding, non-enforceable intentions declared therein. The Parties will fulfil their tasks under this MoC on a best-effort basis.

ARTICLE 6 - ENTRY INTO FORCE, AMENDMENT AND TERMINATION

6.1 This MoC shall enter into force on the date of last signature of the Parties.

6.2 This MoC may be amended in writing at any time with the consent of both Parties.

6.3 Each Party may terminate this MoC by notifying the other Party in writing at least two months before the date of termination.

Signed in two originals in English.

Signed in Brussels on _____ Signed in _____, on _____

ON BEHALF OF THE CLEAN HYDROGEN
JOINT UNDERTAKING

ON BEHALF OF THE MANAGING
AUTHORITY

Mr/Mrs _____

Mr/Mrs _____

ANNEX 1 – ACTIVITIES

Part A: Knowledge Management

1. The Clean Hydrogen JU and the MA wish to initiate a two-way information exchange on hydrogen technologies and market trends and developments, on policy and regulatory frameworks and approaches, and on hydrogen projects planned and implemented across the entire hydrogen value chain, including hydrogen valleys, at regional/national and EU levels as well as on stakeholder engagement activities and research findings and solutions implemented by these projects. Such mutual information exchange will have the dual aim of assisting the MA in enhancing the content of its knowledge base as well as providing support to the Clean Hydrogen JU with regard to the content population and enhancement of the European Clean Hydrogen Knowledge Hub.

To facilitate this, both Parties may contribute with knowledge and expertise, covering the entire hydrogen value chain.

Sources of knowledge and expertise may include, but are not limited to:

- a) the European Hydrogen Observatory, including ad-hoc webinars if deemed necessary to delve into its details, which serves as a central platform for providing comprehensive information on technology trends, market trends, and technologies used in the entire hydrogen value chain.

- b) when operational, the European Clean Hydrogen Knowledge Hub which aims to gather, encompass, and analyse information and data coming from the Clean Hydrogen JU projects and the available tools/platforms of the Clean Hydrogen JU, as well as other relevant platforms.
 - c) relevant material produced by the Clean Hydrogen JU and its stakeholder network, including that featured in the European Hydrogen Observatory.
 - d) information on hydrogen projects and valleys or other relevant initiatives and events supported by the MA as well as relevant data, documents and other materials produced by these projects and initiatives.
2. The Clean Hydrogen JU may support the MA's efforts in identifying EU funding opportunities for hydrogen-related projects, by:
 - a) providing relevant information on hydrogen-related calls for proposals and related events, including lessons learnt.
 - b) sharing any new EU policy development that may impact funding opportunities or synergies related to hydrogen projects and valleys.
 - c) when possible, establishing links with relevant EU stakeholders and information exchange platforms and networks, including the National Contact Point (NCP) networks of EU Funding Programmes.
3. The Clean Hydrogen JU and the MA may collaborate on activities aimed at promoting cooperation with stakeholders in hydrogen research and innovation activities and encouraging better acceptance of hydrogen projects and valleys among a wide audience. Such activities may include events such as workshops, conferences and summits, info days, exhibitions, and public debates.

Part B: Capacity Building

1. The Clean Hydrogen JU wishes to continue dialogue with the MA to enable activities that foster networking, cooperation, and knowledge exchange among interested parties, consisting initially of the 10 selected MAs in the framework of the Clean Hydrogen JU's Technical Assistance initiative¹³. Such activities may cover:

¹³ In the framework of the "Technical Assistance to generate Synergies with the Clean Hydrogen Partnership" initiative of the Clean Hydrogen JU, a Call for Expression of Interest was launched by the Clean Hydrogen JU on the 6th of June 2023 aiming to develop cooperation with 10 selected regional and national Managing Authorities from the EU-27 and Horizon Europe associated countries in relevant key areas for hydrogen development. For more info see: https://www.clean-hydrogen.europa.eu/media/news/call-expression-interest-receiving-technical-assistance-generate-synergies-clean-hydrogen-2023-06-06_en

- a) exchange of lessons learnt and transferability of best practices in areas such as development and implementation of hydrogen plans and projects covering the entire hydrogen value chain, development of regional/national hydrogen ecosystems, development and implementation of regional/national hydrogen-related policy and regulatory frameworks, instruments and approaches, including on overcoming delays in spatial planning, licensing, and permitting and approval processes as well as fast-track schemes to streamline administrative processes and accelerate the realisation of hydrogen initiatives across the entire hydrogen value chain, hydrogen-related certifications and standards applied in other EU countries, project management methodologies, stakeholder mapping, needs assessment methodologies and engagement strategies, business models and innovative procedures and solutions implemented throughout the entire hydrogen value chain.
- b) promoting and strengthening collaboration and encouraging possible synergies among the MAs for the development and implementation of hydrogen-related research and innovation activities.
- c) reaching out to other interested parties based on their interest, relevance, and commitment to advancing hydrogen-related initiatives.

[Add customised text in line with the MA's particular needs that fall within the areas mentioned above]

2. The Clean Hydrogen JU wishes to support the MA's endeavours to strengthen its hydrogen capabilities across the entire value chain by connecting with hydrogen projects, to enable the identification and utilisation of best practices, the development of relevant research and innovation activities and technologies in the MA's territory, as well as support the MA in tackling identified gaps or challenges in the development and implementation of relevant projects. Such knowledge transfer activities shall rely on publicly available information and may cover aspects such as project management and governance, stakeholder engagement, regulatory frameworks, business models and innovative procedures and solutions implemented.

Within this framework, the Clean Hydrogen JU may, where possible, enable various activities with hydrogen projects, including on-site visits to demonstrations and hydrogen infrastructure piloted within such projects, participation in thematic workshops and direct connections as well as bilateral or multilateral exchanges with hydrogen projects covering the following areas:

- a) Hydrogen production: this includes hydrogen production from renewable energy sources (RES), including electrolysis.

- b) Hydrogen storage and distribution: this includes hydrogen storage, hydrogen in natural gas grid, liquid hydrogen carriers, improving existing hydrogen transport means, compression, purification and metering solutions and hydrogen refuelling stations.
- c) Hydrogen end-uses: this includes use of hydrogen technologies in the transport sector, as well as clean heat and power generation applications.
- d) Hydrogen valleys.
- e) Hydrogen supply chains.
- f) Cross-cutting activities

[Add customised text in line with the MA's particular needs that fall within the areas mentioned above]

3. The Clean Hydrogen JU may support the MA's efforts in enhancing its skills and knowledge as well as those of its actors across the entire value chain to facilitate the transition to a hydrogen economy. In this regard, the Clean Hydrogen JU may provide publicly available educational and training material to the MA, and / or facilitate contacts with training providers with the aim of helping the MA in the development of upskilling and reskilling programmes, by leveraging initiatives that include but are not limited to the European Hydrogen Observatory platform and the European Hydrogen Academy.
- [Add customised text in line with the MA's particular needs that fall within the areas mentioned above]

4. The Clean Hydrogen JU may support the MA's efforts in enhancing its capabilities in the development and implementation of hydrogen projects and valleys, by disseminating information on how to apply or use different possible instruments that include but are not limited to Project Development Assistance (PDA), including disseminating to the MA the material and best practices produced by those initiatives.

Part C: Programme Management, Funding and Financing

1. The Parties wish to jointly explore opportunities for synergies on funding and ways to materialise them in line with the relevant legal frameworks. Such synergies may include:
- a) Alternative funding following the awarding of a Seal of Excellence or other similar mechanisms foreseen for calls for proposals in the Clean Hydrogen JU work programmes.

- b) Co-funded actions that allow cumulative funding between different Union, national and regional programmes, in compliance with applicable legislation on cumulation of funding, including state aid legislation.
- c) If possible, and subject to legal feasibility, transfer of Resources from Member States to the Clean Hydrogen JU Programme, which shall be used for the benefit of the Member State concerned only.

[Add customised text in line with the MA's particular needs that fall within the areas mentioned above as well as the legal basis provided]

2. The Parties may engage in dialogue related to the development of national/regional calls for proposals that foster hydrogen development across the entire value chain. Within this framework, the Clean Hydrogen JU may assist the MA towards the alignment of national/regional calls with its own calls. This alignment may cover aspects that include, but are not limited to, strategic objectives and priority areas, admissibility and eligibility criteria and conditions, regulatory requirements and standards, data collection and reporting requirements, evaluation and award criteria including evaluation procedure and methodology, as well as funding structure and mechanisms.
3. The Clean Hydrogen JU may provide guidance to the MA aiming to enhance its capabilities in the evaluation of hydrogen project proposals under the MA's own programmes, streamlining the evaluation process and improving the selection procedure. Such support may include, but is not limited to, leveraging the Clean Hydrogen JU's industry and research connections with project evaluation experience and expertise with the aim of fostering knowledge exchange, engaging in dialogues concerning lessons learnt from past calls, on the basis of publicly available information, disseminating MA's calls for expert evaluators, and collaborating on simplifying evaluation procedures for high-quality proposals awarded with EU quality labels.