Interreg CENTRAL EUROPE
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H2CE

Report on the testing of the methodology H2 voucher mechanism for hydrogen utilization in Usti Region

Content

1. General Introduction

H2 vouchers represent an innovative tool aimed at supporting the **development of hydrogen technologies and applications** in European regions. The main objective of introduction of **support scheme** of this kind is to strengthen cooperation between key actors such as industry, research institutions, public administrations and other stakeholders. These vouchers serve to pilot hydrogen solutions, promote innovation and create new business opportunities in the hydrogen sector.

The primary interest in the development of this instrument stems from the needs of the regions involved in the project to ensure sustainable growth and transition to cleaner energy sources. H2 vouchers enable the creation of concrete examples of good practice, support local innovation and accelerate the preparation of regions for the transition to hydrogen technologies.

This report details the methodology and findings from the process of implementing and methodology testing H2 vouchers in the regions involved in the H2CE project. At the same time, it summarizes the results of consultations and feedback received from the Ústí Region, which was the pilot region for the implementation of this instrument, and from other partner regions involved in the H2CE project.

This document includes:

- Concept and objectives of H2 vouchers
- Description of pilot activities and experience from the Ústí Region
- Overview of consultations and feedback from other regions
- Recommendations for further development and implementation of the instrument in the European context
- Consultations and methodology testing were carried out through cooperation with local partners, working groups, seminars and online meetings. These activities allowed not only to assess the usability and benefits of H2 vouchers, but also to identify opportunities and challenges for their wider deployment in practice.

2. Drafting of the H2 voucher mechanism

The concept of the H2 voucher mechanism builds upon proven support schemes that have been successfully implemented in various regions to date. These schemes primarily focus on supporting projects during their early development stages, when verifying their relevance, feasibility, cost-effectiveness, and sustainability is crucial. The creation of the H2 voucher mechanism naturally draws on these successful examples of development initiatives, which have stimulated innovation and enabled the implementation of promising projects at the regional level.

One of the key drivers behind the development of H2 vouchers was the widespread lack of low-threshold support schemes. **These tools** are critical for project initiators, including SMEs, start-ups, research organizations, and municipalities, who often lack the financial resources or expertise to validate the feasibility of their ideas. This gap is particularly significant for stakeholders exploring hydrogen technologies as part of their decarbonization pathways. While many see the potential of hydrogen production or utilization, they may not yet have the necessary experience or tools to develop such projects effectively. Addressing this deficit is vital to prevent promising initiatives from remaining unrealized or abandoned during the early stages of development.

The H2 voucher mechanism has been designed to tackle these challenges by:

- Providing a **flexible** and **easily** accessible tool to support the initial validation of project ideas,
- Enabling the effective assessment of technical feasibility, economic viability, and environmental sustainability,
- Reducing entry barriers for innovative actors, including SMEs, start-ups, public entities, and research organizations.

What makes the H2 voucher mechanism unique is its specific focus on hydrogen technologies and related innovations that contribute to regional decarbonization efforts and energy transformation. The strength of this mechanism lies in its simplicity, adaptability, and ability to respond to the diverse needs of project developers. Key activities supported through H2 vouchers include:

- Conducting (pre-)feasibility studies and cost-benefit analyses (CBA),
- Designing and validating pilot solutions,
- Testing new technologies or approaches,
- Preparing project documentation for subsequent funding applications.

- The Design Process of the H2 Voucher Mechanism
- The development of the H2 voucher methodology was guided by several core principles:
- Inspiration from best practices: Drawing lessons from successful regional support schemes, identifying strengths, and addressing areas for improvement.

Engagement with key stakeholders: Consulting with representatives from industry, research institutions, public administrations, and other relevant actors to ensure the mechanism aligns with real-world needs.

International transferability: Incorporating experiences and feedback from partner regions participating in the H2CE project to ensure the tool can be applied across different regional and national contexts.

The outcome is a robust and adaptable tool that supports not only the technical and economic development of hydrogen-related projects but also contributes to building regional hydrogen ecosystems. The methodology has been tested through consultations and feedback, ensuring that H2 vouchers reflect both local and international needs. This process has confirmed the mechanism's readiness to become an effective instrument for advancing hydrogen technologies, fostering innovation, and supporting decarbonization efforts across Europe.

3. Introduction of the H2 voucher mechanism

The **H2 voucher mechanism** is an innovative tool designed to support the **early stages of projects related to hydrogen technologies**. This chapter outlines the **basic principles of the mechanism**, including its **objectives, structure, and key elements**, to provide a clear and comprehensive understanding of how it operates.

To effectively illustrate the concept, the following diagram presents an **overview of the logic behind the H2 voucher mechanism**, highlighting the main steps and interactions involved in its implementation:

H2 VOUCHERS MECHANISM

Basic Idea/Goal:
Support of the development of hydrogen (H2) projects in the region.

Source of Money

Regional or City Budget

EU Cohesion Programmes

Calls for Projects

Recipients of Vouchers
Primarily: Cities, Municipalities, SMEs
Additional: Large Companies

H2 Voucher Implemetntation
i.e. preparation of pre-feasibility, feasibility, studies, CBA...

The vouchers should help the project holder to decide
whether the project "makes sense or not"

the project holder may use the data for further development or preparing project applications, such as for investment support.

←YES OR NO→

imputs for the holder to look for another solution or another project set up

"Real Life support of the development of the H2 economy"

3.1 The aim of the mechanism

The objective of the H2 voucher mechanism is to provide **financial support** in the form of **non-investment grants** for the preparation and development of project proposals focused on hydrogen technologies and related innovations. This support enables project promoters to bring their projects to the **feasibility stage**, creating high-quality documentation necessary for further steps, such as securing funding from relevant national or international programs.

Projects will be prepared in the form of a **project application**, meeting all formal and substantive requirements of specific funding calls. This ensures that projects are ready for submission to appropriate grant mechanisms or for implementation through alternative funding sources, such as **local budgets, private financing**, or other public and private resources.

The H2 voucher mechanism is designed to lower the **initial barriers to entry** for a broad range of applicants, including small and medium-sized enterprises, research organizations, and public entities. It provides a systematic tool for project preparation, facilitating **technological advancement, decarbonization**, and the energy transformation of regions.

3.2 The reason for providing support

The reason for providing support is to ensure **systematic assistance** in building absorption capacity in line with the needs and goals of **hydrogen strategies** at regional, national, and international levels. The mechanism is designed to facilitate the effective preparation and development of hydrogen-related projects, thereby strengthening the capacity to implement innovative solutions.

The support focuses on establishing a **stable framework** for identifying, preparing, and implementing hydrogen projects. Its objective is not only to help stakeholders initiate activities related to hydrogen technologies but also to enhance their ability to leverage available funding resources and effectively achieve strategic goals in **decarbonization and energy transformation**.

In this way, the mechanism contributes to long-term growth, innovation, and sustainability across various regions and sectors.

3.3 Purpose for which the subsidy is provided - supported measures (activities) of the Programme

The **support programme** focuses on funding the preparation and development of project plans through specific activities that ensure high-quality elaboration of projects to the feasibility stage.

The programme will support:

Preparation of a project plan, which will be submitted to a specific national or international support programme in the form of a project application (including all required annexes), meeting the conditions of formal correctness and eligibility,

Development of a project plan in the form of a **comprehensive project fiche** (feasibility study) containing the mandatory structure and reflecting the project's readiness, with confirmed financing for implementation from other sources (e.g., the applicant's own funds, local budgets, etc.),

Preparation of a project plan in the form of an **Extended Project Brief** (feasibility study), ready for submission to a relevant national or international support programme,

Completion of a project plan in the form of a **comprehensive project fiche** (feasibility study), prepared for financing through alternative sources, such as the applicant's own funds or local budgets.

Structure of the Comprehensive Project Fiche (Feasibility Study)

The project must include the following mandatory elements:

- Identification of the project promoter and partners,
- Abstract of the project,
- Baseline situation (zero option),
- Detailed description of activities and the methods for achieving the target state (including technical/technological solutions, if relevant),
- Target state of the project,
- Description of target groups and identification of project impacts,
- Project timetable,
- Detailed project budget,
- Need for and provision of assets (if applicable),
- Project financial plan,
- Staffing,
- Quantified project outputs,
- Cost-benefit analysis (CBA), if relevant,
- Risk analysis.

Preferred Types of Projects

The programme prioritizes:

- **Partnership projects** that require the coordination of multiple actors and deliver a significant regional impact,
- **Single-promoter projects** that are strategically significant and provide high added value,
- Other projects that demonstrate substantial benefits for hydrogen technology development.

Supported activities:

The programme provides funding for the following activities:

- Ensuring a **project team** for the preparation and development of the project plan,
- Preparation of **studies, analyses**, market research, mapping, and other expert work necessary for the project's development to the feasibility stage,
- Preparation of **feasibility studies** and cost-benefit analyses (CBA), including the design of technological and technical solutions,
- Preparation of **project applications** for submission to relevant national or international funding calls,
- Development of a **comprehensive project fiche** ready for submission to a support programme or for implementation using alternative financial sources (e.g., the applicant's own funds or local budgets).

3.4 Eligible applicants, territorial impact

The programme is open to:

Public entities that meet the following criteria:

- Established for the purpose of satisfying public interest needs,
- Possess legal personality,
- Are predominantly financed, managed, or overseen by public authorities.

Private entities (e.g., SMEs, research institutions) operating within the supported territory.

Projects eligible for assistance must demonstrate a **measurable impact** on the target territory and contribute to the advancement of hydrogen technologies and related innovations.

3.5 Eligibility of project expenditure

Eligible expenditures refer to all costs incurred during the implementation of the project,

provided that they meet the conditions defined by European Union regulations and relevant national legislation. The expenditures must arise no earlier than the official publication of the support programme and be paid in accordance with the concluded Grant Agreement (hereinafter referred to as the "Agreement").

An exception applies to personnel costs for the final month of the project, which are considered eligible provided they are paid no later than the last day of the month following the project's completion.

Grants may only be awarded for expenditures that comply with the following criteria:

- Legal Compliance

The expenditures must adhere to EU legal frameworks, including:

- *Regulation (EU) No 1303/2013* on common provisions for the European Structural and Investment Funds (ESIF),
- *Regulation (EU) No 651/2014* declaring certain categories of aid compatible with the internal market,
- Relevant national legislation of EU Member States.
- Further details are available on the European Commission's funding regulations page: ec.europa.eu/regional_policy.

Principles of Financial Management

- Expenditures must comply with the principles of effectiveness, efficiency, and economy, as defined in EU Financial Regulation (Regulation (EU, Euratom) 2018/1046). These principles ensure that funds are utilized responsibly and deliver measurable impact.
- Guidance on sound financial management can be found at: europa.eu/budget/.

Timing and Payment

- Costs must be incurred and demonstrably paid during the project implementation period in accordance with the Grant Agreement.
- Personnel costs for the final month of the project are eligible if paid by the last day of the following month.

Link to the Programme Objectives

- Expenditures must be directly and exclusively linked to the project implementation and contribute to achieving its objectives.

Transparency and Accountability

- All eligible costs must be identifiable, verifiable, and demonstrable through appropriate documentation (invoices, contracts, payment records) in accordance with Article 125(4)

of *Regulation (EU) No 1303/2013*.

Regional Connection

- Eligible expenditures must have a clear and measurable impact on the target territory where the project is implemented.

Budget Allocation

- The expenditures must be included in the approved project budget and aligned with the Grant Agreement provisions.

3.6 Timeframe of the Assistance Project

The Project implementation start date is the date of commencement of the physical and financial implementation of the activities that are the subject of the Project and will occur at the earliest from the publication of the Programme.

The **maximum duration** of the Project is set at **18 months.**

3.7 Form of support

- Support will be provided in the form of a non-investment grant. State-aid description will be added

3.8 Method of financing

The grant will be paid to the beneficiary within 30 working days after approval of the final report, in cash to the beneficiary's bank account specified in the grant agreement. If the beneficiary is a VAT payer, the grant will be paid only to the account published in the register of taxpayers kept by the beneficiary's tax administrator.

3.9 Assessment and evaluation of the grant application

The application evaluation process takes place in two stages:

- Assessment of the formalities and admissibility of the grant application,
- the substantive assessment of the grant application.

3.9.1. Assessment of the formalities and admissibility of the application

As part of the assessment of formal requirements, the completeness of the application will be assessed, including the submission of all required annexes.

The admissibility check will assess whether the application meets the conditions of the Programme, in particular:

- the eligibility of the applicant,
- whether it is a strategic project,
- eligibility of expenditure,
- form of support, maximum and minimum amounts,
- implementation deadline,

The criteria for checking formalities and admissibility are in the form of exclusion criteria in the form of: FULL / UNFILLED.

The application of an applicant who fulfils the conditions of Substantive evaluation of the grant application

3.9.2 The substantive evaluation sets out the evaluation criteria:

a) The project fiche is sufficiently elaborated, the applicant proposes specific feasible measures and activities.

b) Effectiveness of the project plan - the proposed activities have a high potential to address the defined problem and to contribute significantly to the selected objective(s) of the hydrogen strategy

c) Comprehensiveness of the solution to the problem - are the planned activities of the project plan logically planned in interconnected ways to achieve the intended result?

d) Realistic budget for the preparation of the strategic project - the items in the proposed budget are necessary in terms of eligible supported activities and their amounts are appropriate to the scope of the activities.

The substantive evaluation is carried out by an evaluation committee appointed by XXX, which will evaluate the evaluation criteria as follows

3.10 Application for funding and method of application

The applicant shall submit an application for a grant on the prescribed grant application form together with the required annexes.

The electronically completed grant application must be submitted to the Grant Provider on the Grant Application Form in written form together with all the mandatory annexes in original.

4. Testing of the voucher methodology and consultation within the regions

Testing the H2 voucher methodology and consulting with partners in the regions was a key step in validating this support mechanism and adapting it to the real needs of actors. These activities were aimed at ensuring that H2 vouchers are not only a theoretically functional tool, but also a practical solution to support the development of innovation in the hydrogen economy.

Testing and consultation process

The testing was carried out in several stages:

1. Pilot phase in Ústí Region

The initial testing of the H2 voucher mechanism took place in the Ústí region, which served as the pilot region. This process involved key organisations such as the Innovation Centre of the Ústí Region (ICUK) and representatives of the Ústí Regional Authority (ÚK). Consultations were conducted with experts in regional development and innovation policy, including representatives of regional industry clusters, universities and research institutions.

Feedback from these consultations highlighted the importance of the H2 voucher instrument in reducing entry barriers for SMEs and start-ups, allowing them to test the feasibility and economic sensibility of project ideas at early stages.

2. Consultations in other H2CE regions

After the pilot phase in the Ústí Region, the results were presented and discussed with other H2CE project partners. These consultations took place through online workshops, seminars and individual meetings. Partners from regions with different socio-economic conditions shared their perspectives on the transferability and adaptation of H2 vouchers to their environment. This phase allowed for feedback from a wide range of actors, including industry associations, academic institutions and public authorities.

Motivation and testing objectives

The main motive for testing was to verify:

- Practicality and usability of the tool for different types of project carriers,
- Ability to adapt to regional specificities, including available resources and strategic priorities,
- The effectiveness of the tool in stimulating innovation and supporting the emergence of viable hydrogen technology projects.

Key findings and conclusions

The feedback from the Ústí Region and other regions involved in the H2CE project clearly confirms that H2 vouchers are a promising instrument with a high potential of benefit for the

development of the hydrogen economy. The main conclusions include:

- Flexibility and accessibility: H2 vouchers allow for easy involvement of different actors, thus promoting diversification and innovation.
- Practical use: Project promoters appreciate the possibility to use vouchers to prepare feasibility studies, analyses or pilot projects.
- Strategic relevance: The mechanism responds directly to the needs of regions in building absorption capacity and preparing projects for funding from national or European programmes.

Based on the results of testing and consultations, we are convinced that H2 vouchers are an effective tool for supporting the development of innovative projects and building a sustainable hydrogen ecosystem not only in the Ústí Region, but also in other European regions.

4.1 Feedback from the "testing" and consultation in the Ústí Region

Consultations in the Ústí Region were held with key regional partners, including the Innovation Centre of the Ústí Region (ICUK) and the Ústí Regional Authority (ÚK). These discussions allowed to identify opportunities and challenges related to the theoretical application of H2 vouchers and to ensure that the mechanism is adapted to local conditions and priorities.

The main actors in the consultation:

Innovation Centre of the Ústí Region (ICUK)

Discussions with Zdeněk Hušek, RIS3 Manager for the Innovation Ecosystem of the Ústí Region, and other team members focused on linking H2 vouchers to the regional innovation strategy. ICUK focused on the potential of supporting SMEs and start-ups in the development of hydrogen technologies.

Ústí Regional Authority (ÚK)

Consultations were held with Lukáš Vostrý, Head of the Regional Development Department, who offered insights into the implementation of support schemes and recommendations for simplifying administrative processes. He also provided suggestions for financing the instrument from regional and cohesion resources.

Areas discussed and conclusions

The following key areas were highlighted during the consultation:

Carrying capacity and funding

It was discussed that the carrier of the H2 vouchers should be the county directly, and that funding could be implemented in two ways:

From the county's/region's own budgets, which would ensure greater flexibility and

independence from external sources.

From cohesion funds through an operational programme (e.g. JTF), where the region would manage the reallocation of funds through a call for proposals.

Amount and purpose of support

Recommended amount of aid:

Maximum limit for public bodies: EUR 10 million. CZK 10 000 (EUR 400 000), which allows for the financing of more complex feasibility studies.

For business entities, application of the 'de minimis' rules. The aid should mainly cover expenditure on outsourced studies such as CBAs or feasibility studies, which will simplify the process of proving cost eligibility.

Administrative simplification

Both ICUK and ÚK stressed the need to minimise the administrative burden. It was recommended to fund only direct costs related to analytical activities such as the preparation of studies and to avoid complications in including personnel costs.

Absorptive capacity of the region

It was confirmed that an analysis of the absorption capacity of the region should be carried out prior to the launch of the Facility to ensure that the Facility responds to real needs.

Ensuring consistency with the project and the managing authorities

It was recommended to follow the requirements of the H2CE project and to regularly consult the proposed actions with the managing authorities (e.g. Interreg).

4.2 Feedback from the “testing” and consultation in other H2CE regions

All feedback that can be obtained from the project partners from around the beginning of January to mid-February should be included here