

Open Call for Tender

for a Consortium for knowledge analysis and assessment in WP 2 in The EISMEA HyQual Net project

Starting date: 2025-02-20

Deadline for tenders: 2025-03-27

I Introduction

I.1 General

The EISMEA project 'Hydrogen quality in dedicated gaseous grids' (short: *EISMEA HyQual Net*) is a pre-normative project in support of EU policy and legislation on decarbonisation of the energy sector using hydrogen in pipeline infrastructure (see I.2).

The *EISMEA HyQual Net* project aims at the bundling of technical knowledge relevant for standardisation, the identification of the concrete standardisation needs as well as technical assistance by elaborating draft scopes and draft specifications for the relevant hydrogen quality topics related to dedicated gaseous hydrogen grids (covered by different CEN-CENELEC Technical Committees): The *EISMEA HyQual Net* project topics generally are:

- (1) Leakage detection with and without odourisation (safety).
- (2) Leakage detection and monitoring (emission reduction).
- (3) Odorants without sulphur.
- (4) Safety protocols and technical leakage and explosion prevention, measurement and management procedures.
- (5) Purification.
- (6) Hydrogen quality parameters.

The outcome of the project will build a basis for the (further) development and/or revision of European standards.

The *EISMEA HyQual Net* project works also for the broad stakeholder involvement in the subsequent overall standardisation process.

The *EISMEA HyQual Net* project will, furthermore, support the operators of the **hydrogen network, storage and terminals** to meet their responsibilities under the Gas and Hydrogen Decarbonisation Package:

- to ensure efficient hydrogen quality management and stable hydrogen quality in their networks by taking into account hydrogen end-users' quality requirements. It will help to ensure the secure and efficient operation, coordinated development and interoperability of the interconnected system, as well as to avoid restrictions in cross-border flows of hydrogen due to hydrogen quality differences.
- to prevent and minimise hydrogen emissions in their operations and carrying out, at regular intervals, a hydrogen leak detection and repair survey of all relevant components under the operator responsibility.

Additional research, data gathering, and organisation of events, which will lead to discussions with stakeholders along the whole hydrogen production, supply, and consumption chain, can effectively facilitate the standardisation process to happen a lot faster. A more effective standardisation process is required to reach the necessary consensus for adoption of the relevant new standards and revised existing standards in line with the EU policy and legislation as soon as possible.

For this, the *EISMEA HyQual Net* project is structured in the following four work packages (WP):

- WP 1: Management and coordination of the activities.
- WP 2: Pre-normative research: analysis of the results of available research and real-life experience (knowledge analysis).

- WP 3: Technical support for revision of the existing standards and development of new EU standards (writing draft scopes and draft contents for revision and new standards as basis for CEN Technical Committees' work after closure of the project).
- WP 4: Organisation of 2 expert/stakeholders' events on hydrogen purification and leakage detection (Workshops).

The present tender calls for the appropriate consortium for the realisation of WP 2

- a. to perform the analysis of research/study and laboratory test results and
- b. to provide a set of technical reports to be used as content for the elaboration of the draft scopes and draft specifications in WP 3.

This includes interaction and communication with all work packages of the *EISMEA HyQual Net* project and the involvement in planning and realization of two stakeholder workshops.

The details are described in section III.

I.2 Context

The *EISMEA HyQual Net* project replies to the EISMEA call SMP-STAND-2024-ESOS-01-IBA Topic 10 Hydrogen quality in dedicated gaseous grids. EISMEA provides funding for different kinds of pre-normative actions to the European Standardisation Organisations to support the standardisation work. The call is motivated by the EC strategy and legislation for decarbonisation of the energy sector and is built on the Annual Union Work Program for Standardisation 2024 (AUWP 2024) aiming at hydrogen quality standards. It also ties in with the EC intentions to release a Standardisation Request on hydrogen quality based on the Gas and Hydrogen Decarbonisation Package and with the responsibilities of hydrogen network, storage and terminal operators stipulated therein.

DIN and DS have been approved as *EISMEA HyQual Net* project owner. As such they are organizing this tender in the context of the EISMEA project.

The contents of the project are content related to various CEN and CENELEC Technical Committees (e.g. CEN/CLC/JTC 6, CEN/TC 58, CEN/TC 234, CEN/TC 235, CEN/TC 305). These committees will at least be involved in the project information flow.

II Objectives

Generally, the *EISMEA HyQual Net* project aims to accelerate the European standardisation process for hydrogen quality, ensuring safety, efficiency, and interoperability in hydrogen networks across Europe and to foster innovation. This will be achieved by providing technical support to CEN-CENELEC Technical Committees and the EU Commission in the form of:

- a. detailed technical summary of the state of the art and innovation, taken from the analysis of research results including laboratory tests on the project topics with the perspective of standardisation.
- b. draft scopes and draft technical contents for standards deliverables: these will be based on detailed technical summary (see part a. above) which will be evaluated and finalized by CEN-CENELEC Technical Committees who are responsible for the content.

This will be based on the given standards in the field of the project topics and the identified needs by screening the standardisation landscape.

The *EISMEA HyQual Net* project gives support to the standardisation work towards a future EU Standardisation Request in the hydrogen quality field.

With respect to other EU-funded projects and existing hydrogen quality standards, this project will complement the knowledge in the field of the project topics and align with various EU policies, EU directives and regulations related to hydrogen and energy infrastructure for decarbonisation of the energy sector using hydrogen.

This tender aims at engaging the appropriate experts for the project topics to ensure a qualified analysis of available findings and comprehensive and appropriate reports to be used in the *EISMEA HyQual Net* project and as input for the later CEN standardisation.

III Execution

III.1 General tasks of the ‘Consortium for knowledge analysis and assessment’

The ‘Consortium for knowledge analysis and assessment’ will be responsible for the execution of **Work Package 2 of the *EISMEA HyQual Net* project**.

This involves the following tasks:

- a. Collection, analysis and assessment of technical findings from research, laboratory tests, and real-life experiences in the field of the project topics, with the perspective to use the outcome of the analysis and assessments as basis for the determination of the state of the art in the related (future) standards:
 - i. Describing the technical findings and evaluating whether they can build a robust basis for standardisation (only one study or findings proved by others).
 - ii. Identifying where there is already technical consensus between different research/laboratory tests/real life experiences so that their findings can be transposed into normative provisions in European standards.
 - iii. Identifying where contradicting results might make it difficult to transpose them into normative provisions in European standards or where due to studies.
 - iv. Where necessary, a recommendation for further investigations.
- b. Establishment of a technical report for each of the 6 project topics including the analysis and assessment results. These need to be usable as:
 - i. Direct input for WP 3, i.e. the elaboration of draft scopes and draft technical contents for the revision of the existing standards and the development of new EU standards.
 - ii. Further input for the subsequent standardisation process in CEN and CENELEC Technical Committees.
- c. Participation in the planning, preparation, and realisation of two workshops:
 - one during May 2025 to inform about the *EISMEA HyQual Net* project, to gather input for the analysis and assessment as well as the expectations on the subsequent standardisation on the project topics and
 - one towards the end of the project to share project results and get stakeholders’ feedback.

The workshops also aim at creating joint understanding in the fields of the *EISMEA HyQual Net* project topics, strengthening stakeholder involvement and facilitating consensus in the subsequent standardisation.

The project topics are as follows:

1. **Leakage detection with and without odourisation (safety):** investigation for technical solutions for detection and monitoring of hydrogen leakages in underground storage and network infrastructure for transmission and distribution of 100% hydrogen regarding safety, including hydrogen odourisation and stationary detection technologies.
2. **Leakage detection and monitoring (emission reduction):** investigation for technical solutions for hydrogen leak detection and monitoring regarding emissions, encompassing both bottom-up

methods for smaller sites, and top-down methods for larger sites, such as transmission and distribution pipelines and storage facilities.

3. **Odorants without sulfur:** investigation for solutions sulfur-free odorants their performance (olfactory testing) and their potential effect on the different parts of the value chain and their technical implications on the hydrogen value chain, among others, effects on pipeline materials, effect on underground storages (in interaction with 1.)
4. **Safety protocols and technical leakage and explosion prevention, measurement and management procedures:** investigation of transferability of available safety protocols and technical solutions for leakage/explosion prevention, measurement and management currently available for hydrogen onsite production/storage and in infrastructure of natural gas and other gases (incl. comparative analysis of the existing protocols, procedures and measures)
5. **Purification:** investigation of hydrogen purification technologies for applications and integration into the production, transportation, underground storage and consumption systems, incl analysis of their capabilities to remove critical components at the above points of the chain, also with regard to qualitative evaluations for different H₂ purity levels (e.g. 98%, 99.5%, 99.97% and higher)
6. **Hydrogen quality parameters:** documentation of findings on hydrogen quality parameter and their relevance for the parts of the hydrogen value chain as result of the analysis and assessments of 1 to 5 and collection of supplementary and available research results, laboratory tests and real experiences coming along as side-effect during material screening for the analysis of 1 to 5.

Finally five deliverables (technical reports) are expected:

- (1) Report on technical solutions for hydrogen leak detection, encompassing both bottom-up methods for smaller sites, and top-down methods for larger sites, such as pipelines and storage facilities.
- (2) Report on technical solutions for monitoring hydrogen leakages on-site in regard to safety, which could include odorizing hydrogen and installing stationary gas detectors.
- (3) Report on sulphur free H₂ odorants and their technical implications on the value chain.
- (4) Report on feasibility of application for hydrogen networks of available safety protocols and technical solutions for leakage/explosion prevention, measurement and management.
- (5) Report on hydrogen purification systems for applications and integration into production, transportation, and consumption systems.

The results of item 6 'Hydrogen Quality Parameters' are expected to be included as subclause in each of the reports above.

III.2 Timeframe

The overall duration of the *EISMEA HyQual Net* project is 12 months. The Consortium will start its work in the 3rd month of the project and has 6 months for the realisation of the analysis and assessments. It is expected that the experts are available until the end of the project for finalisation of the technical reports and for back questioning.

The timeline for the work of the Consortium for knowledge analysis and assessment is as follows:

Action	Available time	Finalisation in month X of the duration of the project
Collection and analysis of technical findings documentation of knowledge with validation of contents with the EISMEA HyQual Net project owners (regular coordination meetings)	6 months	September 2025: Final hand over to WP 3

Delivery of the final corresponding deliverables (6 technical reports)	+ 2 months	November 2025: Final delivery of deliverables
Support of planning, preparation and realization of the EISMEA HyQual Net project workshops (WS)		May 2025: 1 st WS November/December 2025: 2 nd WS
Experts' Availability for exchange with EISMEA HyQual Net project WP 3 experts		April to December 2025

IV Financial support

The European Commission and EFTA are providing financial support to carry out pre-normative research and analyses of available research and real-life experience in the field of hydrogen. The financial support from the European Commission and EFTA is based on the SMP 'Single Market Programme call SMP-STAND-2024-ESOS-01-IBA. Unless specified otherwise, costs of external subcontractors are funded 100%, with approx. 95% being borne by EC and 5% by EFTA. Costs have to qualify as eligible as defined in the [Single Market Programme General Model Grant Agreement](#) and also in compliance with [EC Financial Regulation](#), and be justified.

The payment will be divided into several instalments after completion of predefined milestones and approval of the interim/final reports and the justification of costs.

Costs incurred before the Grant Agreement is signed and before the selection procedure is finalized, will not be considered as eligible for EU financial support.

V Selection criteria

The applicants shall comply with the following requirements:

- Consortium of legal persons with a seat in an EU or EFTA country.
- Consortium of competent partners with proven European dimension including:
 - A proven technical background in the technical project topics.
 - A wide experience in standardisation processes, creation of standardisation documents and consensus building activities in European and other standardisation environments (national and international).
- Completeness of reply to tender.
- Demonstration of the ability to carry out the knowledge analysis and assessment including the establishment of the requested reports at the specified target dates in compliance with the award criteria below:
 - Documented experience
 - Network and data availability
 - Organisation
 - Price (best value for money)

The selection will be carried out by the Tender Evaluation Committee.

VI Award criteria and scoring system

The selection of the most suitable candidate will be based on a scoring system, with a total of 100 points allocated across different evaluation criteria. A minimum threshold of 70 points is required for consideration.

Incompleteness in the application can result in negative impact for the evaluation of award criteria. Please note also that proposals deviating from the technical specifications may be rejected for non-conformity.

a) Documented experience (maximum 60 points)

- **Knowledge on the topics (15 points):** The subcontracting candidate should demonstrate extensive experience in the following five topics applicable to hydrogen: Leakage detection with and without odorization (safety); leakage detection and monitoring (emission reduction); odorants without sulfur; safety protocols and technical leakage and explosion prevention, measurement and management procedures; and purification and/or the experience to transpose the technical topics from other gases to hydrogen.
- **Ability to analyse scientific studies and laboratory test results (15 points):** This is important to verify the quality of the work. The subcontractor should possess the capacity to work with analytical quality systems and can exploit real-life experience with the hydrogen value chain to produce the necessary assessment of hydrogen security related topics. This is particularly relevant when analysing research results and test methods. The candidate must be an experienced researcher with demonstrable skills from real-life know-how in analysis and provision of available technical knowledge from research (incl. laboratory tests).
- **Industrial and academic background of the relevant personnel involved (8 points):** The subcontractor should possess experience in both research (incl. laboratory work) and grid operation (incl. storage), since the project requires candidates with technical expertise in specific hydrogen topics and extensive academic analytical skills. Therefore, the subcontractor should possess a strong mix of industrial and academic experience.
- **Experience in European and/or International standardisation work of the relevant personnel involved (7 points):** The subcontractor should have experience in drafting European and/or international standards, including contributions to CEN-CENELEC Technical Committees and preferably coordination with ISO Technical Committees.
- **Experience with comparable projects on hydrogen (5 points):** The project involves a mapping and an analysis of the development and validation of test methods for hydrogen, including leakage detection, odorants, safety protocols, and purification. The subcontractor should therefore demonstrate extensive experience in working with similar projects (preferably linked to e.g., Horizon Europe Pillar II, Cluster 5: Climate, Energy and Mobility), and should indicate the number of years of experience the subcontractor has with similar projects.
- **Experience in the management of tasks (5 points):** The project involves the management of multiple work packages (WPs) and tasks with regular interaction and mutual contribution among experts. Therefore, the subcontractor must demonstrate experience working with multiple work packages and project tasks from comparable projects.
- **Perceptiveness and communication skills (5 points):** Ability to ensure the integration and consolidation of all content provided by the Consortium Partners, exchanged with Project Partners (e.g. the Project Coordinators, work package leaders and experts), and obtained from workshops. Ability to address the relevant points precisely and structured in communications by correspondence or in virtual meetings. Ability to timely produce reports when requested and when relevant.

b) Network and data accessibility (maximum 15 points)

- **Extensive Network and access to Comprehensive Data (15 points):** The subcontractor must demonstrate access to comprehensive and up-to-date data related to hydrogen quality topics, including leakage detection, odourisation, purification, and safety procedures. This includes data from laboratory tests, real-life experiences, and existing research. For this the subcontractor should have a well-established network within the hydrogen and converting gas sector, including connections with research institutions, industry experts, university and other relevant stakeholders.

c) Organisation (maximum 10 points)

- **General project management and communication skills of the relevant personnel involved (5 points):** The subcontractor should demonstrate the ability to carry out the project by good project management and strong cooperation and communication skills. The project includes regular coordination meetings, workshops, and continuous monitoring of work, which requires a high level of collaboration. The subcontractor should be able to exchange knowledge with stakeholders along the hydrogen value chain in the analysis process and in the two workshops to motivate them to contribute with their technical findings to the knowledge analysis. The subcontractor should preferably also be able to attract stakeholders to join the standardisation process on hydrogen quality in the later standardisation process.
- **Ability to submit agreed deliverables at specified dates (5 points):** The subcontractor should demonstrate experience in adhering to structured timelines and deadlines for EU-funded project, particularly in budgeting, producing technical reports, workshops, and coordinating meetings (e.g., by explanation which instruments and methods are used to support the work flow and to follow-up on the progress as well as tasks).

d) Price (maximum 15 points)

- **Best value for money (15 points).** The subcontractor should demonstrate a clear cost structure with a competitive price for their services, ensuring that the costs are reasonable and justified based on the scope of work and market rates while delivering high-quality results. Proposals should clearly outline manpower allocation, hourly rates, and budget justification. Lack of transparency in resource allocation will result in a deduction of points.

VII Eligibility criteria

The following candidates will be excluded:

- Candidates who were the subject of a non-likely judgment of recourse for a professional infringement.
- Candidates who are in an irregular tax situation or in an irregular special taxation situation.
- Candidates who provide incomplete or erroneous information.
- Candidates who submit their application after the submission deadline.
- Candidates with any conflict of interest.

VIII Selection Procedure

Applicants will be selected by the Tender Evaluation Committee, which is composed of representatives from topic related CEN/TCs, organisations and industry, and a representative from the CEN - CENELEC Management Centre and the technical project coordinator from *EISMEA HyQual Net* project.

Applications will be reviewed against the selection and award criteria above, taking into account the indicated weighting in percentage).

The report on the selection of the experts by the Tender Evaluation Committee will be submitted to the European Commission and EISMEA prior to the contracting of the experts.

VIII Tenders

Tenders shall be sent to **Sultan Wood (sw@ds.dk)**, as soon as possible, to be received at the latest by **2025/03/27**. The tender must be in English and contain:

- Application form in the format given in **Annex A**, including:
 - detailed information on the approach to realise the knowledge analysis and assessment
 - detailed information on the skills and expertise as well as costs and
 - the signature of the declaration (at the end of Annex A), by which the candidate(s) certifies not to be subject to one of the exclusion criteria as described in the clause “Eligibility criteria” and the veracity of the adjoining documents
- Curriculum Vitae of each relevant person participating in the project, demonstrating the necessary expertise for the ‘*Consortium for knowledge analysis and assessment*’.
- Applicants must specify the fields of expertise related to the project topics that they apply for.
- A schedule and a description of the execution of the tasks which will be carried out in the project as such.
- Appropriate documentation to prove the economic and financial capacities.
- Any further documents to prove the qualification required in the above clauses on Selection and Award criteria.

Tenders should be sent by legal representatives, i.e. to be considered, any possible association to the *EISMEA HyQual Net* project must be formalized according to the local legislation before submitting the tender. Working teams, partnerships and other groups of people, particularly under the aegis of an institute, qualify as contractors for the service contracts awarded during this CfT (Call for Tender). Partnerships or joint ventures and other legally binding co-operations regardless of their organizational form qualify as well, provided they are recognized entities under the applicable national laws. Potential candidates may come from the public sector as well as from the private industry. It is essential, however, that the qualifications and experience of the individual fulfilling the tasks are properly described.

It is expected that applicants apply as a consortium. In the consortium one institute/entity needs to be identified as the leader of the consortium and the division of labour between the consortium members should be clearly described and justified. Only the leader of the consortium would sign the contract with the contractor and ensure that all tasks are fulfilled and is responsible for the justifications and expenses of the consortium members. It is essential however that all members of the consortium are properly identified within the offer.

Regarding question concerning the information provided in this call for tender or in case of need for clarification or additional information please contact **Sultan Wood, international standardisation consultant, sw@ds.dk**.

If due to queries or other reasons supplementary information to this call for tender is required, this will be published on the website of the **Danish Standards**.

Candidates may additionally apply by separate application for the call for experts for the realisation of the *EISMEA HyQual Net* WP 3, i.e., for giving technical assistance by elaborating draft scopes and draft specifications for CEN deliverables on the project topics 3, 4 and 5. Interest should be indicated outside of the tender reply.

Please send your application to **Sultan Wood (sw@ds.dk), Danish Standards, Göteborg Plads 1, 2150 Nordhavn**.

Please note that, to ensure equal treatment of all tenders, it is not possible to modify offers after their submission in relation to the technical and financial proposals.

Potential candidates may come from the public sector, universities and from private industry, always indicating their affiliation. It is essential that the qualifications and experience of the individual fulfilling the tasks are accurately described



Annex A

Application to a Call for Tender in compliance with SMP Single Market Programme Regulation (and its financing decision).

1- Contact details of the Consortium

Name:
Position:
Phone:
Email address:
Country of residence:
Personal website (if any)

2- Information about the organisation/s that the expert is working for (incl. name, website, contact person, phone, email):

3-Curriculum Vitae of the experts participating in the Consortium (maximum 4 A4 pages as annex to this document)

IMPORTANT: The Curriculum Vitae must document the experts' experience with the verified skills and expertise in the table in clause 4 below.

4-Skills and expertise

Please describe and show evidence of the required skills and expertise (including your proposed approach).



	Skills and expertise	Yes/No	Description
1	Ability to co-ordinate and lead a team of experts.		
2	Ability to ensure the integration and consolidation of all contents provided by the Project Team experts.		
3	Experience in working with multiple work packages and project tasks from comparable projects.		
4	Management skills such as coordinating a group of experts, promoting consensus, convening meetings, ensuring the circulation of relevant documents, early recognition and solution of problems (e.g. concerning time and content of the deliverables), and reporting by correspondence or at meetings by addressing the relevant points.		
5	Proven experience and a relevant degree in a technical field for the role the candidate intends to apply for.		
6	Deep knowledge of the European Standardisation system, with a focus on CEN and CENELEC. Wide experience in standardisation processes, creation of standardisation documents and consensus building activities in European and other standardisation environments (national and international).		
7	Ability to contribute as content provider for the requested deliverable/s for the project they are applying for. Have access to an extensive network in hydrogen fields relevant to HyQual Net project.		
8	Communication skills and proficiency in English.		

5-Information on the costs of the experts

The following table shall be used in the tender to give detailed information on the costs regarding the work of the Consortium.

Consortium Partner/Organisation	Daily rate	Number of man-days	Total cost
	0,00	0	0,00
	0,00	0	0,00
	0,00	0	0,00

IMPORTANT: It is presumed that the project is realised by online communication, so that travel costs are not expected. If the Consortium partners nevertheless decide to meet face-to-face as part of this project, the costs are not eligible and are considered covered by the daily rate.

6-Description of the offer (answer to the call for tender)

Describe the overall approach for the realization of the tasks

I certify – on behalf of the consortium – that all documents provided are veracious and in conformity with reality and certify not to be in any situation described below:

- a) subject of a non-likely judgment of recourse for a professional infringement
- b) to be in an irregular tax situation or in an irregular special taxation situation
- c) to provide with incomplete or erroneous information

I also declare that I have no conflict of interest by submitting the present offer.

Signed:

On behalf of :(indicate name here)

Date: