



HVDC-WISE



Deliverable 1.1

Project Handbook

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Acronyms

CA	Consortium Agreement
EEAB	External Expert Advisory Board
EC	European Commission
GA	General Assembly
HVDC	High Voltage Direct Current
IR	Interim Reports
PCB	Project Coordination Body
PM	Person Month
PR	Periodic Reports
R&R	Reliability and Resilience
TSO	Transmission System Operator
UKRI	UK Research and Innovation
WP	Work Package
WPL	Work Package Leader

Executive Summary

The HVDC-WISE project handbook provides an overview of the project management structure and infrastructure adopted during the project or set out in the Consortium Agreement and Grant Agreement. This handbook also represents a set of guidelines for all HVDC-WISE members.

After outlining the key data of the project, this document details the adopted management structure, as well as the roles and responsibilities of each management body. Then, the project management infrastructure implemented or adopted is explained; this infrastructure consists of the tools, procedures and work practices adopted to enable effective management. The subsequent chapter describes how the official technical and financial reports to the Granting Authorities will be handled. Finally, guidelines on dissemination and communication activities are described.

The project handbook will be updated as necessary throughout the duration of the project by including new project infrastructures required, expanding, or modifying those already in place.

1. Project Basis

1.1 Project key data

The HVDC-wise project (for **HVDC**-based grid architectures for reliable and resilient **WideSprEad** hybrid AC/DC transmission systems) is a Research and Innovation Action co-funded by the EU Horizon Europe Programme and by UK Research and Innovation agency (referred to as “The Granting Authorities” along this document) under the Grant Agreement number 814258. This project represents an answer to the call HORIZON-CL5-2021-D3-02-08 “Electricity system reliability and resilience by design: High-Voltage, Direct Current (HVDC)-based systems and solutions” from the topic HORIZON-CL5-2021-D3-02 “Sustainable, secure and competitive energy supply” of the Work Programme 2021-2022, cluster 8 “Climate, Energy and Mobility”.

The project officially started on 01/10/2022, and it ends 42 months later, on 31/03/2026.

HVDC-WISE has total budget of 8,263,648 €, of which:

- 6,868,313 € shall be financed by the European Commission
- 1,092,995 € shall be financed by UK Research and Innovation (UKRI)
- and 302,340 € are own resources provided by some partners in the consortium

The detailed budget per beneficiary and the maximum corresponding contribution from the EC and UKRI is detailed in the Annex 2 of the Grant Agreement. The total person power of the project is 808.5 Persons Month PM

1.2 Participants

The HVDC-WISE project gathers fourteen participants. It brings together academia, research institutes, a consulting services company and five TSOs. This allows a focused consideration of a range of potential R&R solutions, answering key resilience questions applicable to all HVDC developments.

TABLE 1-1 LIST OF PARTNERS IN THE CONSORTIUM

Participant No.	Participant legal name	Short name	Type ¹	Country
1 (Coordinator)	Supergrid Institute	SGI	IND	FR
2	TenneT TSO GmbH	TTG	IND (TSO)	DE
3	Scottish and Southern Energy	SSE	IND (TSO)	UK
4	Comillas University	COMU	ACA	ES
5	University of Strathclyde	UOS	ACA	UK
6	RWTH Aachen University	RWTH	ACA	DE
7	EPRI Europe	EPRI	IND	IE
8	Technische Universiteit Delft	TUD	ACA	NL
9	Tractebel Impact Belgium S.A. (Engie Impact)	ENGI	IND	BE
10	University of Cyprus	UCY	ACA	CY

¹ IND: Industry; ACA: Academia; RTO: Research Technology Organisation; TSO: Transmission System Operator

11	Ricerca sul Sistema Energetico - RSE S.p.A.	RSE	RTO	IT
12	Energinet	ENET	IND (TSO)	DK
13	Amprion GmbH	AMP	IND (TSO)	DE
14	Statnett	STA	IND (TSO)	NO

In the following sections, the short name of the partner and its legal name indicated in Table will be used indistinctly.

1.3 Project structure and deliverables

1.3.1 Work packages list

For the efficient management and effective implementation of the work, HVDC-WISE is structured into 6 technical Work Packages, plus 1 work package dedicated to project management (WP1) and 1 transversal package dedicated to dissemination and exploitation of the results (WP8). The list of work packages, the corresponding leader, efforts, and duration is summarized in Table 1-2.

TABLE 1-2 LIST OF WORK PACKAGES

	Work Package Title	Leader	PM	Start	End
1	Project management	SGI	59	Oct 2022	Mar 2026
2	Requirements, opportunities, frameworks, and demonstration needs for R&R of future AC/DC systems	SSE	54,3	Oct 2022	Sep 2023
3	Concept architectures for reliable and resilient AC/DC systems	TTG	141,7	Oct 2022	May 2024
4	Enabling technologies for future AC/DC hybrid systems	SGI	120	Oct 2022	May 2024
5	Simulation tools for R&R-oriented planning and operation of hybrid AC/DC power systems	COMU	124,8	Oct 2022	Aug 2024
6	R&R-oriented network expansion planning methodology: application to use cases	UOS	123,5	Apr 2023	Jul 2025
7	Validation of control and protection concepts on realistic use cases	RWTH	118	Mar 2024	Jan 2025
8	Pathways towards hybrid AC/DC grids: dissemination and exploitation	EPRI	67,2	Oct 2022	Mar 2026
Total PM			808,5		

1.3.2 Deliverables

The release of project deliverables is one of the mechanisms that allow monitoring of project progress. In HVDC-WISE, each work package comes with a set of deliverables associated with it.

The following table lists all the deliverables of the project and details to which work package they are associated, which partner is leading the deliverable (relevant for Section 3.5 which describes the process to review these deliverables), the type of deliverable, its dissemination level as well as the date for which the deliverable is due.

TABLE 1-3 LIST OF DELIVERABLES

Deliverable 1.1

N°	Deliverable Name	WP	Lead	Type ²	Diss. Level ³	Due Date
D1.1	Project handbook	WP1	SGI	R	PU	Dec 2022
D1.2	Data Management Plan	WP1	SGI	DMP	PU	Jan 2023
D1.3	Detailed Project Management Plan	WP1	SGI	R	SEN	Nov 2022, Nov 2023, Jan 2025
D2.1	Resilience needs and objectives	WP2	SSE	R	PU	Mar 2023
D2.2	Requirements and demonstration targets of the use cases	WP2	ENGI	R	SEN	Mar 2023, Sep 2023
D2.3	Key regulatory/code/framework questions	WP2	STA	R	SEN	Sep 2023
D3.1	Suitable grid architectures	WP3	TTG	R	SEN	Mar 2023, May 2024
D3.2	Control concepts	WP3	TUD	R	SEN	May 2024
D3.3	Protection concepts	WP3	SGI	R	SEN	May 2024
D4.1	Identification of key technologies, potential benefits and restrictions	WP4	SGI	R	PU	Mar 2023, Sep 2023
D4.2	Models and guidelines on modelling approaches and model description	WP4	UOS	R	PU	Mar 2024
D4.3	Library of models	WP4	RWTH	OTHER	PU	May 2024
D4.4	Simulation results from the library of models	WP4	SGI	R	PU	May 2024
D5.1	Scope and specifications of the tools and model needs	WP5	COM U	R	PU	Mar 2023
D5.2	Simplified test systems	WP5	COM U	OTHER	SEN	Mar 2023
D5.3	Tool for reliability and resiliency-oriented expansion planning	WP5	RSE	OTHER	SEN	Dec 2023, Aug 2024
D5.4	Tool for cascading event quantification and operational mitigation strategies	WP5	UCY	OTHER	PU	Dec 2023
D6.1	Methodology to address HVDC design options and enhancing system resilience	WP6	UCY	R	PU	Mar 2024
D6.2	High level design and regulatory lessons from the “highly meshed” use case	WP6	AMP	DEM	SEN	Mar 2025
D6.3	High level design and regulatory lessons from the “small/medium synchronous area” use case	WP6	SSE	DEM	SEN	Mar 2025
D6.4	High level design and regulatory lessons from the “multipurpose” use case	WP6	TTG	DEM	SEN	Jul 2025
D7.1	Validation of control and protection concepts for the “highly meshed” use case	WP7	RWTH	DEM	SEN	Jan 2025, Oct 2025
D7.2	Validation of control and protection concepts for the “small/medium synchronous area” use case	WP7	SSE	DEM	SEN	Jan 2025, Oct 2025
D7.3	Validation of control and protection concepts for the “multipurpose” use case	WP7	SGI	DEM	SEN	Apr 2025, Jan 2026
D7.4	Benefits and risks of HVDC-based solutions in real grid applications	WP7	RWTH	R	PU	Jan 2026
D8.1	Impact evaluation, dissemination plan and stakeholder analysis	WP8	EPRI	R	SEN	Mar 2023

² R: Report, DMP: Data management plan, OTH: Other, DEM: Demonstrator, DEC: Websites, press & media actions

³ PU: Public, SEN: Sensitive

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D8.2	Short-term impact assessment – long term impact roadmap	WP8	TTG	R	SEN	Mar 2023, Mar 2026
D8.3	Conformity assessment scheme & information exchange standard recommendations	WP8	TTG	R	PU	Jan 2026
D8.4	Recommendations on planning methodologies and functional requirements	WP8	TTG	R	PU	Jan 2026
D8.5	Resilient Hybrid AC/DC Grids Online Training Module	WP8	TTG	R	PU	Jan 2026
D8.6	Technology roadmap and deployment scenarios	WP8	TTG	R	PU	Jan 2026
D8.7	Recommendations on regulatory and market framework	WP8	ENET	R	PU	Mar 2026
D8.8	Visual identity, project website and social network accounts	WP8	EPRI	DEC	PU	Dec 2022

Note that, if there is more than 1 date indicated in the “Due to Date” column, this means that a first version of the deliverable will be provided in the first date and updates will be provided in the following dates.

2. Project management structure

To have an effective management of the HVDC-WISE project, the project management structure depicted in Figure 1 has been adopted. This structure allows to cover from the strategic level to the operational level of the project.

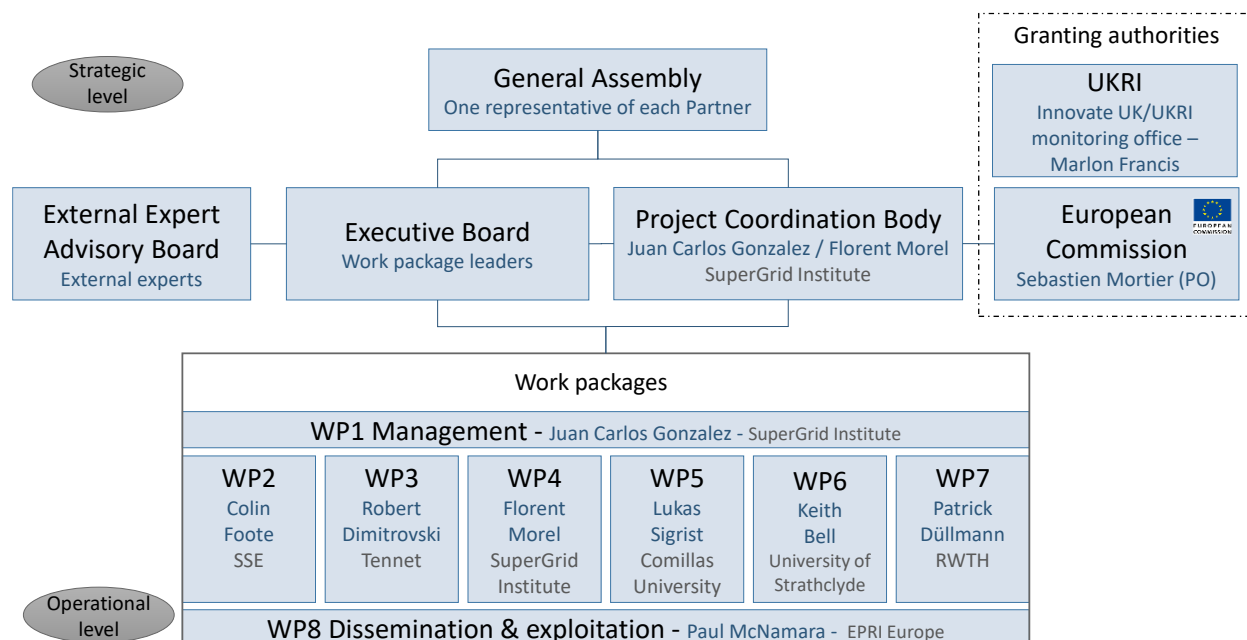


FIGURE 1 PROJECT MANAGEMENT STRUCTURE AND BODIES

In the following subsections, the role and responsibilities of each consortium body are explained.

2.1 General Assembly

As described in the Consortium Agreement, the General Assembly (GA) is the ultimate decision-making body of the consortium. The General Assembly consists of one representative of each party (or General Assembly Member). The Project Coordination Body chairs all meetings of the General Assembly, unless decided otherwise in a meeting of the General Assembly. The General Assembly shall be free to act on its own initiative to formulate proposals and take decisions. In addition, all proposals made by the Executive Board shall also be considered and decided upon by the General Assembly.

The following decisions shall be taken by the General Assembly:

- **Content, finances and intellectual property rights:**
 - Proposals for changes to Annexes 1 and 2 of the Grant Agreement to be agreed by the Granting Authorities
 - Changes to the Consortium Plan
 - Modifications or withdrawal of Background in Attachment 1 (Background Included).
- **Evolution of the consortium:**
 - Entry of a new Party to the Project and approval of the settlement on the conditions of the accession of such a new Party
 - Withdrawal of a Party from the Project and the approval of the settlement on the conditions of the withdrawal

- Identification of a breach by a Party of its obligations under this Consortium Agreement or the Grant Agreement.
- Declaration of a Party to be a Defaulting Party
- Remedies to be performed by a Defaulting Party
- Termination of a Defaulting Party's participation in the Project and measures relating thereto
- Proposal to the European Commission represented by the Project Officer (PO) for a change of the coordinator entity
- Proposal to the European Commission represented by the Project Officer (PO) for suspension of all or part of the Project
- Proposal to the European Commission represented by the Project Officer (PO) for termination of the Project and the Consortium Agreement.
- **Appointments:** On the basis of the Grant Agreement, the appointment, if necessary, of:
 - Executive Board Members
 - External Expert Advisory Board Members

2.2 Executive Board

As described in the Consortium Agreement, the Executive Board (EB) shall consist of the Project Coordination Body, one representative of each work packages leaders designated by such Work packages leaders and the eventual representatives of the other Parties appointed by Project Coordination Body. The Project Coordination Body shall chair all meetings of the Executive Board, unless decided otherwise by a majority of two-thirds. In case of a change in the composition of the Members of the Executive Board, the Project Coordination Body proposes such change in writing to the representative of each Work packages leaders one month before the Executive Board meeting.

The Executive Board shall:

- Prepare the meetings, propose decisions, and prepare the agenda of the General Assembly
- Seek a consensus among the Parties
- Be responsible for the proper execution and implementation of the decisions of the General Assembly
- Monitor the effective and efficient implementation of the Project
- Collect information at least every 6 months on the progress of the Project, examine that information to assess the compliance of the Project with the Consortium Plan and, if necessary, propose modifications of the Consortium Plan to the General Assembly.
- Support the Project Coordination Body in preparing meetings with the Project Officer and in preparing related data and deliverables
- Prepare the content and timing of press releases and joint publications by the consortium or proposed by the European Commission represented by the Project Officer (PO).

In the case of abolished tasks as a result of a decision of the General Assembly, the Executive Board shall advise the General Assembly on ways to rearrange tasks and budgets of the Parties concerned. Such rearrangement shall take into consideration any prior legitimate commitments which cannot be cancelled.

2.3 Project coordination body

As described in the Consortium Agreement, the Project Coordination Body (PCB) acts as the legal entity acting as the intermediary between the Parties and the European Commission represented by the Project Officer. It is important to note that UKRI will be directly in contact with the UK partners (SSE and University of Strathclyde) via the Innovate UK/UKRI monitoring office.

The Project Coordination Body shall, in addition to its responsibilities as a Party, perform the tasks assigned to it as described in the Grant Agreement and the Consortium Agreement.

In particular, the Project Coordination Body shall be responsible for:

- Monitoring compliance by the Parties with their obligations under this Consortium Agreement and the Grant Agreement
- Appointing the Members of the Executive Board
- Keeping the address list of Members and other contact persons updated and available
- Collecting, reviewing to verify consistency, and submitting reports, other deliverables (including financial statements and related certifications) and specific requested documents to the Granting Authorities
- Transmitting documents and information connected with the Project to any other Parties concerned
- Administering the financial contribution of the European Commission
- Providing, upon request, the Parties with official copies or originals of documents that are in the sole possession of the Project Coordination Body when such copies or originals are necessary for the Parties to present claims.

If one or more of the Parties is late in submission of any Project deliverable, the Project Coordination Body may nevertheless submit the other 'Parties' Project deliverables and all other documents required by the Grant Agreement to the European Commission represented by the Project Officer in time.

If the Project Coordination Body fails in its coordination tasks, the General Assembly may propose to the European Commission represented by the Project Officer to change the coordinator entity.

The Project Coordination Body shall not be entitled to act or to make legally binding declarations on behalf of any other Party or of the consortium, unless explicitly stated otherwise in the Grant Agreement or this Consortium Agreement.

The Project Coordination Body shall not enlarge its role beyond the tasks specified in this Consortium Agreement and in the Grant Agreement.

2.4 Work package leaders

Each work package is led by a work package leader (WPL). The Work Package Leaders are responsible for the execution of the tasks included in each Work Package and for fostering a collaborative work environment among the different members involved.

The work package leader shall:

- Coordinate the activities within the work package and ensure that the tasks are carried out effectively.

- Make a detailed review and validation of the deliverables within their work package before sending it to the executive board and coordination body for final review.
- Be responsible for monitoring the correct distribution of resources within the work package at the operational level.
- As a member of the executive board, transmit all information that may be of concern of the executive board (progress of the WP, blocking points, potential threats, etc.).

The following table presents the different WP leaders and emails.

TABLE 2-1 LIST OF WORK PACKAGE LEADERS

WP#	WP leader name	Partner	e-mail
WP1	Juan Carlos Gonzalez	SuperGrid Institute	juan-Carlos.GONZALEZ@supergrid-institute.com
WP2	Colin Foote	SSE	Colin.Foote@sse.com
WP3	Robert Dimitrovski	Tennet	robert.dimitrovski@tennet.eu
WP4	Florent Morel	SuperGrid Institute	Florent.MOREL@supergrid-institute.com
WP5	Lukas Sigrist	Comillas University	lsigrist@comillas.edu
WP6	Keith Bell	University of Strathclyde	keith.bell@strath.ac.uk
WP7	Patrick Düllmann	RWTH	p.duellmann@iaew.rwth-aachen.de
WP8	Paul McNamara	EPRI Europe	PMcNamara@epri.com

2.5 Task Leaders

Each work package is divided in Tasks. Each task is led by a Task Leader, responsible for the coordination and execution of the activities in each task in a daily basis. The task leader is also responsible for task contribution to the associated deliverables. A very dynamic communication between the task leader and the work package leader is encouraged. The partners leading each task can be found on the Grant Agreement as well as on Deliverable D1.3 “Project management plan”.

2.6 External Expert Advisory Board

The External Expert Advisory Board (EEAB) is in charge of providing feedback on technical proposals by the Executive Board, information on market prospects, contribute to the Dissemination of public Results and their adoption by the ecosystem. An External Expert Advisory Board (EEAB) will be appointed and steered by the Executive Board. The PCB will ensure that a non-disclosure agreement is executed between all Parties and each EEAB member following the rules described in the Consortium Agreement. The EEAB members will be allowed to participate in General Assembly meetings upon invitation but not have any voting rights.

As described in the Grant Agreement, different institutions have accepted to nominate a representative to the EEAB. Among the institutions that have agreed to join the HVDC-WISE EEAB are ENTSO-E, T&D Europe, Wind Europe, NSWPH, ESIG, Vattenfall and Elia Group.

3. Project management infrastructure

According to [1], a project management infrastructure, for the most part, consists of systems of policies, standards, procedures, and guidelines that define how project management work is to be performed. This chapter describes therefore the procedures and tools adopted by the consortium to enable the effective management of HVDC-WISE. Some of the procedures were agreed on the Consortium and Grant Agreements and some of them have been adopted during the first months of the project. It is important to emphasize that these procedures will be revised as necessary during the course of the project.

3.1 Strategic level meetings

As described in Section 2, the project is managed at two levels, the strategic level and the operational level. This section describes the procedures regarding the information exchanges at the strategic level (i.e., between the General Assembly, the executive board, the project coordination body, and the European commission).

3.1.1 General Assembly meetings

The General assembly meetings are face to face meetings to discuss the project direction and agree on strategic actions needed to reach milestones and deliverables (including every point described in section 2.1). The members of the General Assembly (or a representative, see section 2.1) are convened to attend to this meeting. The organization and the chairing of these meetings are the responsibility of the Project Coordination Body.

As stated in the consortium agreement, these meetings will be held at least two times a year (Extraordinary meetings can be done at any time upon request of the Executive Board). In HVDC-WISE it has been decided to hold these meetings during the Technical General Meetings (See section 3.2.1) starting in M6 (March 2023), as to minimise travels and expenses. The Project Officer and the EEAB members are allowed to participate in General Assembly meetings upon invitation but do not have any voting rights.

3.1.2 Executive Board meetings

The executive board meetings are either face-to-face or remote (videoconference) meetings, where the daily management of the project is discussed as well as every responsibility of the EB described in section 2.2. The members of the Executive Board (or a representative, see section 2.2) are convened to attend to this meeting. The organization and the chairing of these meetings are the responsibility of the Project Coordination Body.

In the HVDC-WISE project, it has been decided to hold weekly Executive Board meetings during the first two months of the project to ensure that the entire project infrastructure is correctly implemented from the beginning. This frequency is to be reviewed from month 3 (December 2022), and the procedures will follow what is stated in Sections 3.1.3 and 3.1.4. It is important to remark that an extraordinary EB meeting can be held whenever an EB member requests it.

3.1.3 Procedures for strategic level meetings

Representation in meetings

Any member which is appointed to take part in a strategic level meeting, shall designate one representative. Any representative:

- Should be present or represented at any meeting.
- May appoint a substitute or a proxy to attend and vote at any meeting.
- Shall participate in a cooperative manner in the meetings.

Preparation and organisation of meetings

The Project Coordinator Body is the responsible of convening and organising the strategic level meetings. For the preparation of those meetings, the PCB shall:

- Give a written notice of a meeting to each member of the meeting
- Prepare and send each Member of that Consortium Body an agenda.

Any member of those meetings may add an item to the original agenda by written notice to all the other Members of the meeting. The time schedules of these actions as well as the frequency of the meetings are summarized in the following table.

TABLE 3-1 PREPARATION AND ORGANISATION OF MEETINGS

Meeting	Frequency	Notice period	Sending agenda	Adding agenda items
Ordinary general assembly	At least twice a year	45 calendar days	21 calendar days	14 calendar days
Extraordinary general assembly	At any time upon request of the Executive Board or 1/3 of the Members of the General Assembly	15 calendar days	10 calendar days	7 calendar days
Ordinary executive board	At least quarterly	14 calendar days	7 calendar days	2 calendar days
Extraordinary executive board	At any time upon request of any Member of the Executive Board	7 calendar days	7 calendar days	2 calendar days

3.1.4 Decision taking mechanisms

Decisions will only be binding once the relevant part of the Minutes has been accepted according to Section 6.3.1.2 of the Consortium Agreement (CA).

Voting rules and quorum

Each Consortium Body shall not deliberate and decide validly in meetings unless two-thirds (2/3) of its Members are present or represented (quorum). If the quorum is not reached, the chairperson of the Consortium Body shall convene another ordinary meeting within 15 calendar days. If in this meeting the quorum is not reached once more, the chairperson shall convene an extraordinary meeting which shall be entitled to decide even if less than the quorum of Members is present or represented.

Each Member of a Consortium Body present or represented in the meeting shall have one vote.

A Party which the General Assembly has declared according to Section 4.2 to be a Defaulting Party may not vote on its identification as Defaulting Party or regarding the decisions relating to its participation and termination in the consortium or the resulting consequences.

Decisions shall be taken by a majority of two-thirds (2/3) of the votes cast. Associated Partners shall not vote nor veto decisions on proposals for changes to Annex 2 of the Grant Agreement to be agreed by the European Commission represented by the Project Officer or any other decisions in relation to the Granting Authorities. For the avoidance of doubt, the presence or representation of Associated Partners shall not account to reach the necessary quorum for these decisions.

Veto rights

A Party which can show that its own work, time for performance, costs, liabilities, intellectual property rights or other legitimate interests would be severely affected by a decision of a Consortium Body may exercise a veto with respect to the corresponding decision or relevant part of the decision.

When the decision is foreseen on the original agenda, a Party may only veto such a decision during the meeting.

When a decision has been taken on a new item added to the agenda before or during the meeting, a Party may veto such decision during the meeting or within 15 calendar days after receipt of the draft minutes of the meeting.

A Party that is not appointed to participate to a particular Consortium Body may veto a decision within the same number of calendar days after receipt of the draft minutes of the meeting.

When a decision has been taken without a meeting a Party may veto such decision within 15 calendar days after written notice by the chairperson of the outcome of the vote.

In case of exercise of veto, the Members of the related Consortium Body shall make every effort to resolve the matter which occasioned the veto to the general satisfaction of all the Parties.

A Party may neither veto decisions relating to its identification to be in breach of its obligations nor to its identification as a Defaulting Party. The Defaulting Party may not veto decisions relating to its participation and termination in the consortium or the consequences of them.

A Party requesting to leave the consortium may not veto decisions relating thereto.

Minutes of meetings

The chairperson of a Consortium Body shall produce written minutes of each meeting which shall be the formal record of all decisions taken. He/she shall send the draft minutes to all Members within 15 calendar days of the meeting.

The minutes shall be considered as accepted if, within 15 calendar days from receipt, no Member has sent an objection by written notice to the chairperson with respect to the accuracy of the draft of the minutes by written notice.

The chairperson shall send the accepted minutes to all the Parties and to the Project Coordination Body, who shall retain copies of them.

3.2 Operational level Meetings

This subsection describes the procedures related to information exchanges at the operational level (i.e., technical information within and between work packages).

3.2.1 Technical General Meetings

The technical general meetings are face to face meetings dedicated to share among the consortium the progress and achievements in all the ongoing work packages. Representatives of every partner are invited to assist. The members of the Advisory Board will be also invited to provide feedback on the project progress. These meetings are organised by the Project Coordination Body.

In cases requiring more extensive discussion by WP, the partners can benefit from the occasion to hold meetings for each work package (thus reducing the number of travels). Technical General Meetings are also the opportunity to hold face to face General Assembly meetings.

The frequency of the general meetings is every 6 months. The first general meeting of the project (Month 6) will be held during the first week of April 2023 in the city of Brussels.

3.2.2 Work package meetings

The face-to-face work package meetings are dedicated to share among the work package members the progress and achievements inside the work packages. Representatives of every partner involved in the work package are invited to assist. The organisation of these meetings is the responsibility of the work package leader.

Among the HVDC-WISE consortium, we have planned resources and travel budget for holding 3 physical meetings along the duration of each work packages in addition to the kick-off meeting, where working sessions for each work package were held. The third work package meeting is to be held at the end of each work package as to present the work package final state and results.

3.3 Information management

Providing an effective information exchange channels as well collaborative workspaces is an important key to the success for the management of HVDC-WISE.

In addition to the official internal and official reports to the Granting Authorities (See section 4), the participants are encouraged to maintain active communication with the WP leaders to inform them on the progress and identified issues. In turn, the WP leaders shall keep informed the Project Coordination Body about the technical progress and issues. On the administrative and legal side, all partners are invited to directly inform the Project Coordination Body about any potential issue.

3.3.1 Document management

Internal documents

For all the internal information exchanges of HVDC-WISE, the coordinator entity (SuperGrid Institute) has set up a SharePoint space hosted in SuperGrid Institute's servers. SharePoint is a collaborative platform that integrates natively with Microsoft Office. It allows not only to share files among the consortium, but also to work collaboratively on documents.

Access to the SharePoint is controlled and managed by the coordinator entity in order to maintain privacy. New members of the project must inform the coordinator entity their wish to access the platform via an email.

All the members of the project are invited to store the relevant information for the project in the HVDC-WISE SharePoint.

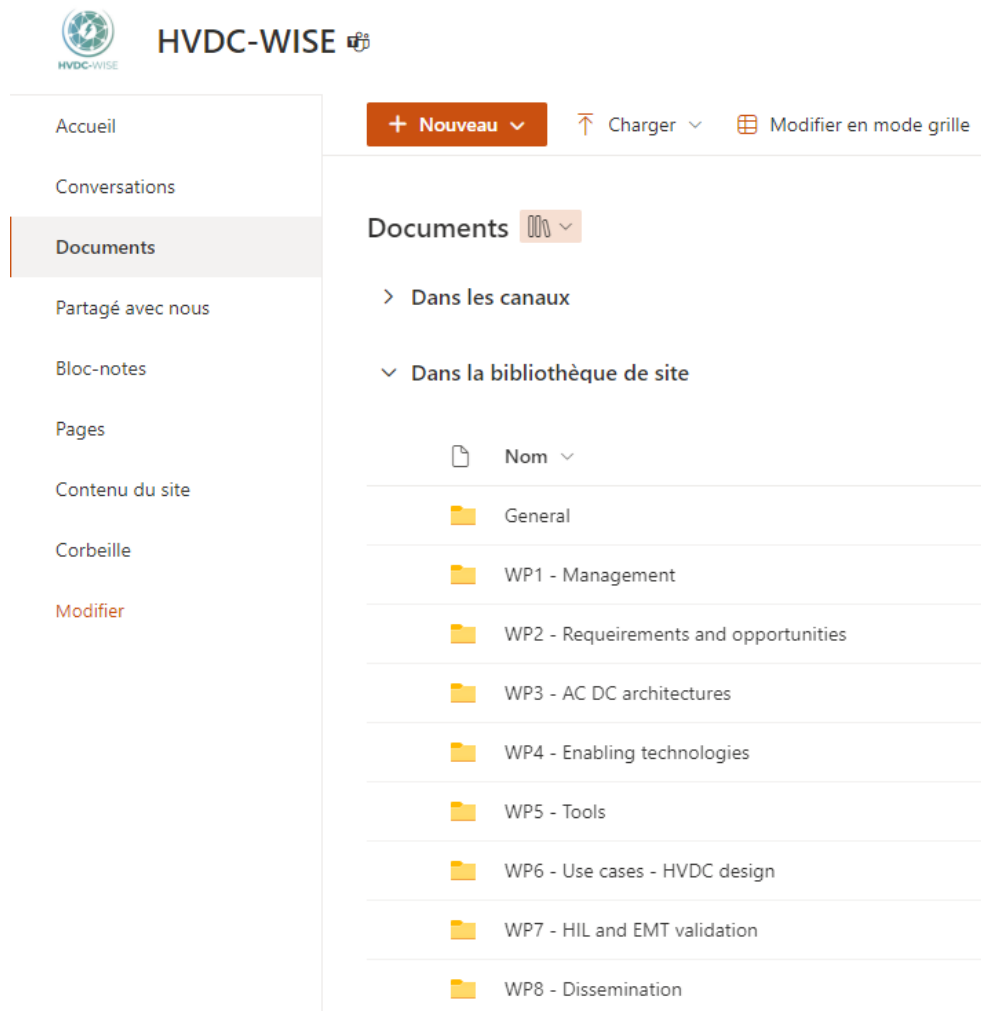


FIGURE 2 OVERVIEW OF THE HVDC-WISE SHAREPOINT

The structure of the SharePoint is presented in Figure 2. A dedicated space for each work package has been created as well as a “General” folder where documents related with common or transversal activities are stored (general meetings, templates, etc.). Inside each work package folder, there are public folders accessible to all partners and a private section in which sensible information can be shared among a reduced number of partners. The access to the private section is managed by SuperGrid Institute.

Public external documents

The official public repository for the HVDC-WISE project documents (i.e. project public deliverables and presentations) is accessible through the project website <http://hvdc-wise.eu/>. The website represents the main dissemination channel for the project (See [2] for more information).

3.4 Templates

Word templates and PowerPoint templates were created for use by project partners. These templates act as a means of establishing a common visual aesthetic across deliverables and presentations.

- A word template was created for use across the project. The front of this word template can be seen in Figure 3.



FIGURE 3 FRONT COVER OF THE WORD DOCUMENT TEMPLATE

- A PowerPoint template, for use in project presentations, was similarly created for use across the project. The opening slide for the template is shown in Figure 4.



FIGURE 4 FRONT SLIDE OF POWERPOINT TEMPLATE

More details are available in another public HVDC-WISE deliverable [2].

3.5 Deliverables: Review and submission

To ensure their quality before submission, all the deliverables will follow a reviewing process. The process for all HVDC-WISE deliverable is the following:

- I. The first draft of the deliverable generated by the **deliverable leader** is ready. The deliverable draft should be ready between three and four weeks before the due date for WP internal review.
- II. The **work package leader** notifies the reviewers that the first draft is ready for revision. The reviewers (at least one) are nominated at least 4 weeks in advance.
- III. The **reviewer(s)** review(s) the deliverable first draft and sends the comments directly to the deliverable leader.
- IV. The **deliverable leader** revises the deliverable according to the review results.
- V. The **work package leader** checks the review and ensures that requests are addressed by the author.
- VI. The **work package leader** informs the EB that the deliverable is ready on SharePoint to be reviewed.
- VII. The **Executive Board** checks the deliverable and sends comments to the deliverable leader.
- VIII. The **deliverable leader** should upload the improved deliverable to the Project coordinator body.
- IX. The **project coordinator body** reviews, approves and submits the deliverable to the European Commission portal.

The following chart summarizes the reviewing procedure.

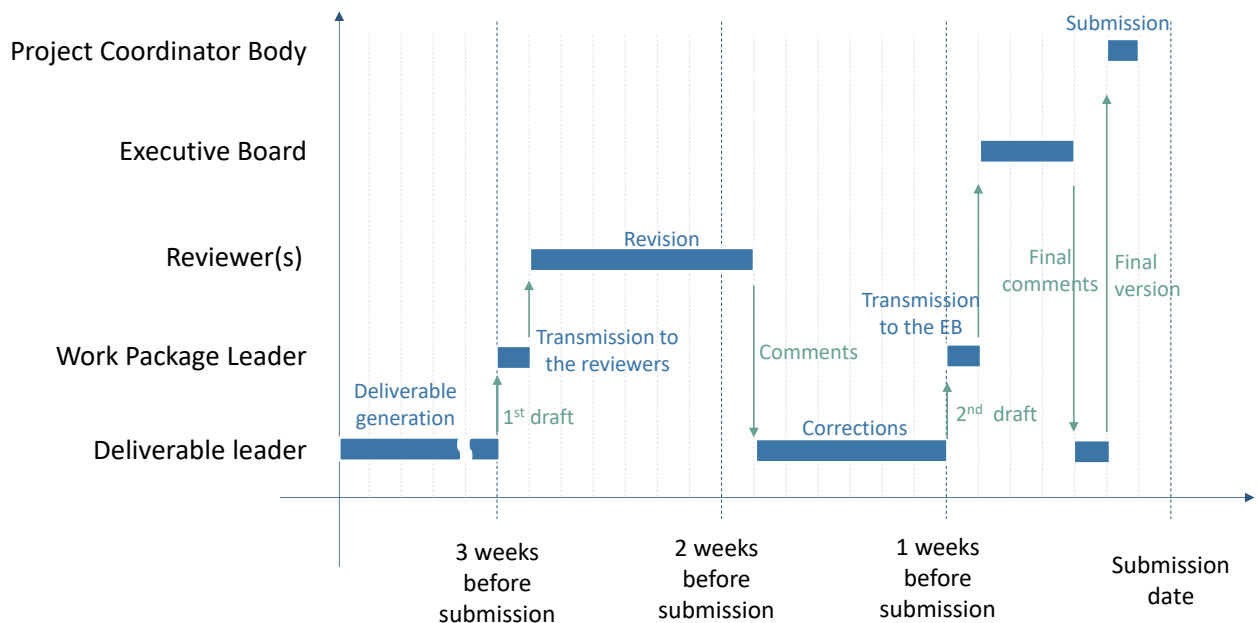


FIGURE 5 REVIEWING PROCEDURE

4. Project Reporting

The objective of the official reporting is for the Granting Authorities to monitor the project's performance, to ensure that the project remains on schedule and that the resources are used effectively. Internally to the project, it allows the strategic level management to track the project progress, identify potential threats and take any corrective actions whenever necessary.

As stated in the Grant Agreement (Article 21), the project partners must continuously report on the progress of the action (e.g. deliverables, milestones, outputs/outcomes, critical risks, indicators, etc; if any), in the Portal Continuous Reporting tool via the Periodic Reports (PR). Standardised deliverables (e.g., progress reports not linked to payments, reports on cumulative expenditure, special reports, etc; if any) must be submitted using the templates published on the Portal. The Periodic Reports (PR) must be in accordance with the official Reporting Periods (RP).

Along the duration of the HVDC-WISE project, there are three official Reporting Periods:

- From month 1 (01/10/2022) to month 14 (30/11/2023)
- From month 15 (01/12/2023) to month 28 (31/01/2025)
- From month 29 (01/02/2024) to month 42 (31/03/2026)

After each reporting period, a Periodic Report (PR) is to be submitted to the granting authority. Moreover, to allow a more frequent monitoring of the project progress and to avoid potential unexpected developments during periodic reporting in the HVDC-WISE project, Interim Reports (IR) will be made additionally to the official Periodic Reports. The Periodic Reports and the Interim Reports are explained in the following.

4.1 Periodic reports

In accordance with the Grant Agreement (Article 21.2), The Periodic Reports are composed of two main parts (see section 4.1.1 and 4.1.2 for more details):

- Periodic technical report
- Periodic financial report

The periodic reports will be submitted at the end of each periodic reports. For HVDC-WISE project, three periodic reports are foreseen:

- 1st Periodic Report covering from month 1 (01/10/2022) to month 14 (30/11/2023)
- 2nd Periodic Report covering from month 15 (01/12/2023) to month 28 (31/01/2024)
- 3rd Periodic Report covering from month 29 (01/02/2024) to month 42 (31/03/2026)

In addition to allowing the Granting Authorities to monitor the progress of the project and to anticipate any deviations from the initial description of the action, it is important to note that the Periodic Reports also allow requesting the payment of eligible costs for the completed reporting period.

As stated in the Grant Agreement, the deadline for submitting the Periodic Reports is 60 days after the end of the Reporting Period. Moreover, the deadline for receiving the interim payments from the EU Granting Authority is 90 days from receiving the periodic report.

4.1.1 Periodic technical report

In accordance with the Grant Agreement (Article 21.2), the periodic technical report includes an overview of the action implementation. This report must be prepared using the template available in the Portal Periodic Reporting tool.

The periodic technical report consists in two main parts (See for more details [3]):

- **Part A.** This part contains structured tables with project information. It is generated by the IT system, based on the information entered on the EC platform. It contains information on the following points.
 - Project summary
 - List of participants
 - List of deliverables
 - List of milestones
 - List of critical risks
 - Project pathway to impact
 - Dissemination and communication activities
 - Financial support to third parties
 - Research infrastructure
 - Mobility declaration
- **Part B.** This part is a narrative description of the work carried out during the reporting period. Part B needs to be uploaded as PDF. It consists of the following parts.
 - Explanation of the work carried out by the overview of the progress
 - Follow-up of recommendations and comments from previous Review(s)
 - Exploitation primarily in non-associated third countries
 - Open science practices
 - Deviations from annex 1 and annex 2 (i.e., deviations from the initial description of the action)

4.1.2 Periodic financial report

In accordance with the Grant Agreement (Article 21.2), the financial part of the periodic report (or periodic financial report) includes a statement on the use of the previous payment.

The periodic financial report includes:

- **The financial statements** (individual and consolidated; for all beneficiaries/ affiliated entities). The financial statements must detail the eligible costs and contributions for each budget category and, for the final payment, also the revenues for the action (see Articles 6 and 22 of the Grant Agreement). All eligible costs and contributions incurred should be declared, even if they exceed the amounts indicated in the estimated budget. Amounts that are not declared in the individual financial statements will not be taken into account by the Granting Authorities.
- **The explanation on the use of resources** (or detailed cost reporting table, if required)
- **The certificates on the financial statements** (CFS) (if required; see Article 24.2 of the Grant Agreement)

4.2 Interim reports

The HVDC-WISE consortium has decided to prepare internal interim reports in the middle of each periodic report. The purpose of the interim reports is to:

- Enable a smooth management of the project
- Allow better anticipation of risks and deviations (technical and financial)
- Shorten the time spent to consolidate data / work on a full period.

Therefore, the Interim reports will be structured in the same manner as the Periodic reports, i.e., they will consist of a technical part and a financial part. The Interim reports will be done using similar templates as the Periodic Reports.

The interim reports will be prepared. For HVDC-WISE project, three Interim Reports are foreseen:

- 1st Interim Report in month 7 (30/04/2023), covering from month 1 (01/10/2022) to month 7 (30/04/2023)
- 2nd Interim Report in month 21 (30/06/2024) covering from month 15 (01/12/2023) to month 21 (30/06/2024)
- 3rd Interim Report in month 35 (31/08/2025) covering from month 29 (01/02/2024) to month 35 (31/08/2025)

4.3 Data collection

As to prepare the necessary information for the Periodic Reports and Interim Reports, it is necessary that the coordinator entity (SuperGrid Institute) collects the technical and financial information of the different partners.

Financial data

The necessary financial data per project partner consist in the same information as in the Periodic Reports: The financial statements, the explanation on the use of resources and the certificates on the financial statements (for the final period).

In order to collect this information, the SuperGrid Institute's financial department has made available to the participants a tracking tool in a form of an excel sheet. This tool will be used for each beneficiary (individual financial statement) as well as for the project (consolidated financial statement). This tool enables to compare with budget and track deviations at beneficiary level as to foresee any potential amendment on the Grant Agreement and provide different indicators necessary for the financial management of the project (EAC – estimate at completion, deviations vs budget, etc.).

HVDC WISE				ACTION TYPE	RIA
ORGANISATION NAME SGI				FUNDING RATE	100%
N°	1	TYPE	0	PARTNER/THIRD PARTY Partner	
COUNTRY	FR - France	STATUS	0		
Period 1 - From 01/10/2022 to 30/11/2023					
TOTAL ELIGIBLE COSTS	0,00 €	CFS	No	15% PERSONNEL COSTS	0,00 €
MAX EU CONTRIBUTION	0,00 €			C. PURCHASE COSTS	0,00 €
REQUESTED EU CONTRIBUTION	0,00 €			AMOUNT TO BE JUSTIFIED	0,00 €
AVERAGE PM RATE	#DIV/0!				

	Direct Costs	Indirect Costs	Total	
Costs	0,00 €	0,00 €	0,00 €	TRUE
Grant	0,00 €	0,00 €	0,00 €	TRUE

Summary by WP							
WP	PM	A. Personnel Costs	B. Subcontracting Costs	C. Purchase Costs	D. Other	E. Indirect Costs	TOTAL
WP1	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
WP2	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
WP3	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
WP4	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
WP5	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
WP6	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
WP7	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
WP8	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
TOTAL	0	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €

FIGURE 6 OVERVIEW OF THE FINANCIAL AND EFFORTS TRACKING TOOL

SuperGrid Institute, as the coordination entity, will launch the first data collection at the beginning of month 7 (01/04/2023) for the period 01/10/2022 – 30/04/2023. The next data collections will be launched at the beginning of months 14 (01/11/2023), 21 (06/2023), 28 (01/01/2025), 35 (01/08/2025) and 42 (01/03/2026).

Regarding the flow of information, all financial data will be collected by the coordination entity (SuperGrid Institute) directly from each party (without going through the work package leaders). Then, a synthesis per work package will be provided to the work package leaders to collect their feedbacks and identify possible deviations.

4.4 Reporting calendar

To summarize the above sections, a reporting calendar is depicted in the following figure.

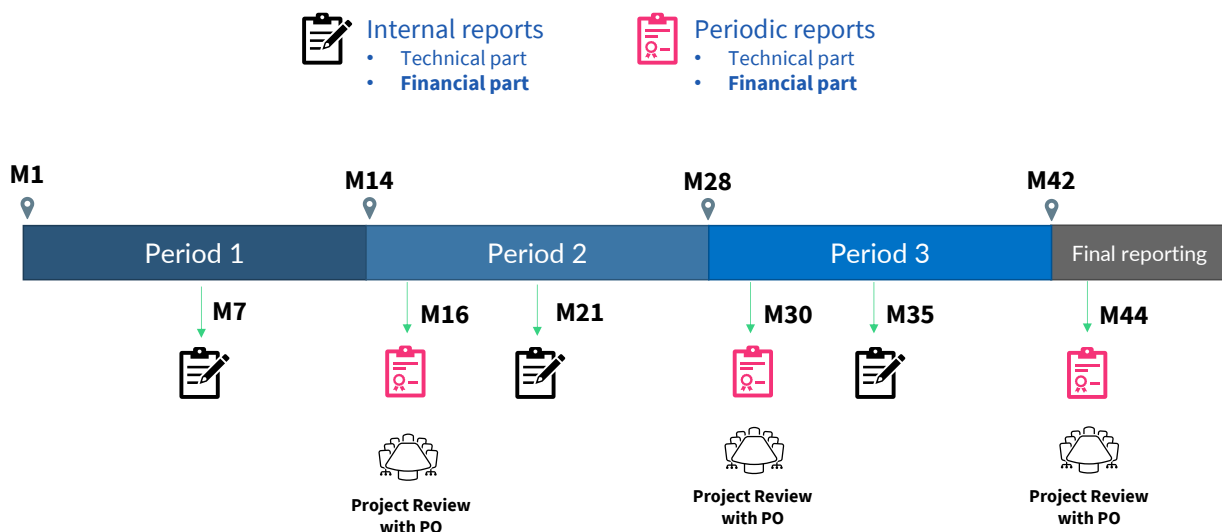


FIGURE 7 REPORTING CALENDAR

5. Dissemination and communication

The partners aim to disseminate results and communicate about the project to maximize its impacts. These impacts are of three types: scientific, societal and economic. For this, dissemination rules (section 5.1) are defined and a plan to engage stakeholders is built (section 5.2). This will be supported by communication channels and visual identity (section 5.3).

5.1 Dissemination rules

5.1.1 General principles

Dissemination of own results by one or several parties including but not restricted to publications and presentations are governed by the procedure of Article 17.4 of the grant agreement and its Annex 5 and are defined in the consortium agreement (Article 8.4). These rules are related on one hand to confidentiality obligations (defined in the Article 10 of the consortium agreement) and, on the other hand, to dissemination obligations (the beneficiaries must promote the action and its results by providing targeted information to multiple audiences). These rules apply during the project and for a period of one year after the end of the project and are presented hereunder.

The parties must disseminate their results as soon as feasible, in a publicly available format, subject to any restrictions due to the protection of intellectual property, security rules or legitimate interests. The parties undertake to cooperate to allow the timely submission, examination, publication and defence of any dissertation or thesis for a degree that includes their results or background subject to the confidentiality and publication provisions agreed in the consortium agreement.

5.1.2 Authorship

All persons who have made substantial professional contributions to the research must be included as authors of scientific publications. For deliverables, persons providing substantial content in the draft document will be mentioned as authors; persons providing written comments and text revisions will be mentioned as contributors; persons providing oral comments or participating to discussions will be mentioned in an acknowledgement section.

5.1.3 Responsibilities regarding other parties

Prior notice of any planned publication shall be given to the other parties at least 45 calendar days before the publication. Any objection to the planned publication shall be made in accordance with the grant agreement by written notice to the Project Coordination Body and to the party or parties proposing the dissemination within 30 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

The consortium agreement defines the reasons to justify an objection. If an objection has been raised the involved parties shall discuss how to overcome the justified grounds for the objection on a timely basis (for example by amendment to the planned publication and/or by protecting information before publication) and the objecting party shall not unreasonably continue the opposition if appropriate measures are taken following the discussion. The objecting party can request a publication delay of

not more than 90 calendar days from the time it raises such an objection. After 90 calendar days the publication is permitted, provided that the objections of the objecting Party have been addressed.

A party shall not include in any dissemination activity another party's results or background without obtaining the owning party's prior written approval unless they are already published by the owning party or by a third party with the owning party's authorization. If the dissemination activity finally lawfully includes another party's results or background, the disseminating Party shall mention the name and contribution of the owning party.

5.1.4 Dissertation or thesis for a degree

Specific rules have been defined for projects related to diploma (e.g., PhD thesis) to avoid disputes when disseminating thesis results if they are based on results from parties. The written consent of the parties is required one month before the start of the procedure (i.e., procedure to define the thesis objectives, data and methodologies to be used and expected results) at the latest, insofar as the parties' area of responsibility is affected (e.g., results, confidential information or background of specific parties will or could be included). The consortium agreement defines rules for the submission of a draft to the parties before the submission to the jury members.

5.2 High level engagement plan

The monitoring of dissemination activities is part of the work package 8 (in task 8.5 "Stakeholder oriented and public dissemination activities" led by EPRI). EPRI is responsible for the preparation and updating of an Engagement Plan (D8.1 "Impact evaluation, dissemination plan and stakeholder analysis"), and for co-ordinating the input of all partners. The objectives are to identify exploitable project results across all work packages and to define strategies to maximise impacts of exploitable results.

The project dissemination and communication strategy are built to ensure that the project outcomes reach target stakeholders, as well as wider dissemination of results. Partners will develop materials to generate public awareness, following best practices for communication and research dissemination, including open access publishing (detailed in further deliverable D1.2 "data management plan"). They will include a focused approach to engage with transmission system operators (TSOs), vendors, regulators, developers, the academic community, and public permitting bodies. They will ensure the project representation in EU Commission, related agency, industry events, including related coordination and support action meetings. They will disseminate regular project updates and summary of project workshops. They will contribute, upon invitation by the CINEA, to common information and dissemination activities to increase the visibility and synergies between Horizon Europe supported actions.

Priorities have been defined among key shareholders as following. The engagement is focused on TSOs, project developers, hardware vendors, the project officer and CINEA. The engagement of the following shareholders is desired: regulatory bodies, Europeans institutions, public permitting agencies and software vendors. The academic community and industrial bodies are considered as shareholders that should be kept informed on the project results while the general public could be passively engaged about the project.

The channels to engage shareholders include events: not only conferences where project results will be presented but also events organized by the project (webinar, panel sessions in conferences, workshops). The project will also disseminate a library of models (deliverable 4.2) and contribute to

free software. Most of the deliverables will be public and scientific publications will be some of the outputs of the project.

The project website and social networks mentioned in next section are also channels to disseminate results.

5.3 Communication and visual identity

The project's visual identity has been established via a logo, colour scheme and official templates (see section 3.4 page 21). The following HVDC-WISE communication channels have also been set up:

- Website (<https://hvdc-wise.eu/> [4])
- Newsletter
- Project-specific email accounts
- Social media: Twitter ([HVDC-WISE \(@hvdc_wise\) / Twitter](#) [5]) , LinkedIn ([HVDC-WISE | LinkedIn](#) [6]).

This is extensively described in a public deliverable [2] which also remind that all materials, including scientific papers and publications produced by the project, must contain a mandatory EU emblem followed by a funding acknowledgement and disclaimer. This deliverable also details the roles and responsibilities related to providing information and news updates, making the information available online, approving the website structure and visual, maintaining the website and managing social media accounts.

6. Copyright

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Changes in this document will be notified and approved by the HVDC-WISE Project Coordination Body. This document will be approved by the HVDC-WISE Project Coordination Body.

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References

- [1] J. Knutson, "Project Management Infrastructure," *PM NETWORK*, vol. 14, no. 11, pp. 23-24, 2000.
- [2] HVDC-WISE, "D8.8: Visual identity, project website and social media networks," 2022.
- [3] European Commission, "Horizon Europe (HORIZON) Euratom Research and Training Programme (EURATOM) - Periodic Report Template," 15 12 2021. [Online]. Available: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/temp-form/report/periodic-report_horizon-euratom_en.pdf. [Accessed 21 12 2022].
- [4] HVDC-WISE, "HVDC-WISE Website," 2022. [Online]. Available: <https://hvdc-wise.eu/>.
- [5] HVDC-WISE, "HVDC-WISE Twitter," 2022. [Online]. Available: https://twitter.com/hvdc_wise.
- [6] HVDC-WISE, "HVDC-WISE LinkedIn," 2022. [Online]. Available: <https://www.linkedin.com/company/hvdc-wise/>.

