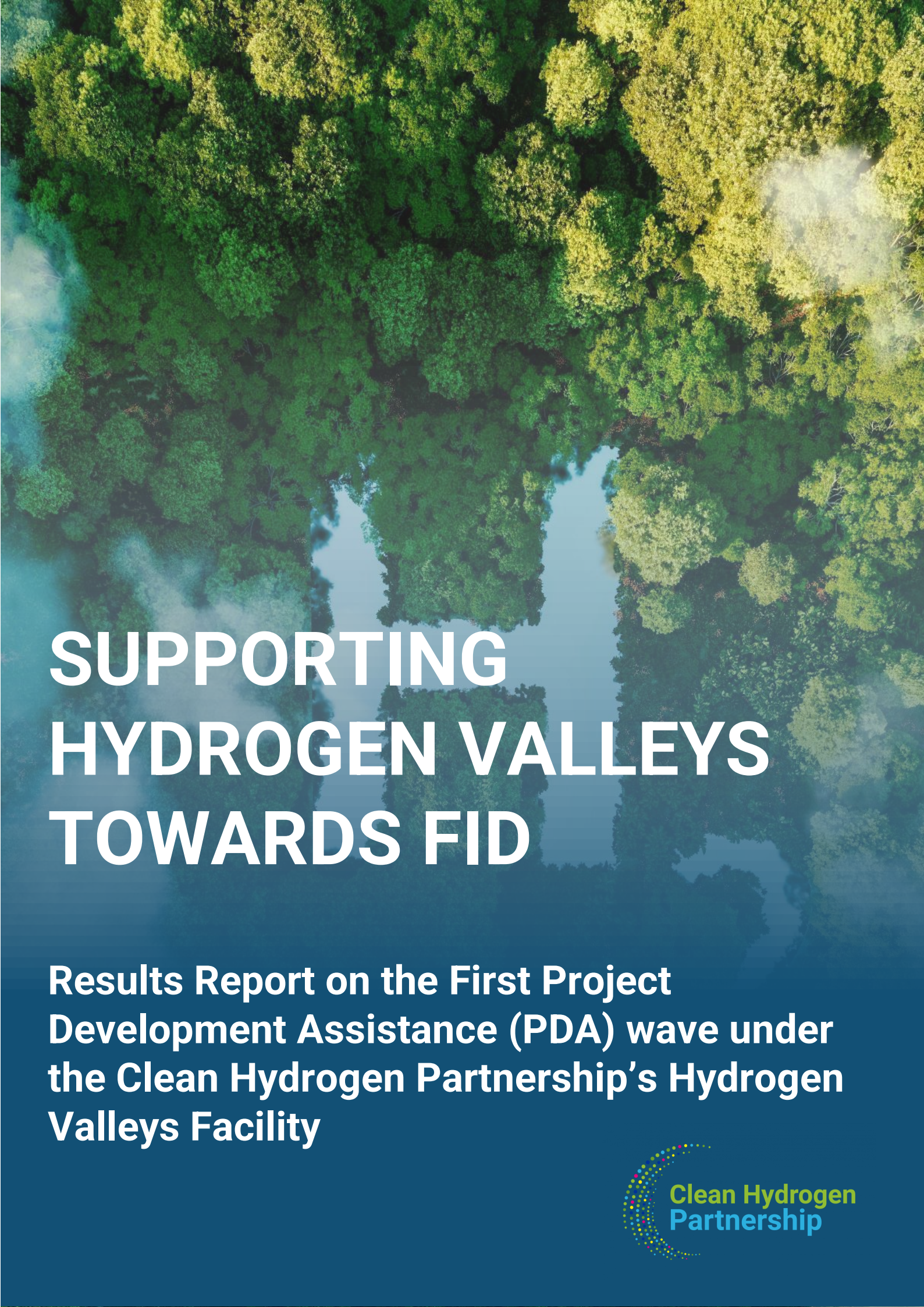

SUPPORTING HYDROGEN VALLEYS TOWARDS FID

Results Report on the First Project Development Assistance (PDA) wave under the Clean Hydrogen Partnership's Hydrogen Valleys Facility

Clean Hydrogen Partnership

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Executive Summary

The Project Development Assistance programme under the Hydrogen Valleys Facility

The Clean Hydrogen Partnership has successfully completed the first wave of its Project Development Assistance (PDA) programme for 15 Hydrogen Valleys.

Hydrogen Valleys are integrated clean hydrogen ecosystems that cover a specific geography, ranging from a local or regional focus - such as industrial clusters, ports, or airports - to broader national or international regions including cross-border hydrogen corridors. Within their geographic scope, these ecosystems supply several sectors through a common hydrogen infrastructure, serving, industry, mobility and energy end uses. Hydrogen Valleys cover multiple steps in the value chain, extending from hydrogen production through storage and distribution to offtakers via various modes of transport.

Through PDA, the Clean Hydrogen Partnership offers targeted support to Hydrogen Valleys at different stages of maturity, helping to accelerate their development and move projects towards the Final Investment Decision (FID) via two different support tracks, tailored to the maturity of each individual Valley: PDA light and PDA plus.

- **6-week PDA light programme**: Aimed at early-stage hydrogen projects, supporting the development of a compelling pre-feasibility project concept and provides structured consulting, gap analysis and standardised support packages
- **12-week PDA plus programme**: Targeted at more advanced hydrogen projects with a concept study in place, offering modular, customised assistance to progress towards feasibility and to define a detailed roadmap to FID

The application phase for the first Call for Applications for PDA support took place between July and September 2025, resulting in a selection of 15 PDA Beneficiaries from eight EU Member States and three associated countries to Horizon Europe out of 36 applications received. The provision of the PDA services for 9 PDA light Beneficiaries and 6 PDA plus Beneficiaries took place between November 2025 and February 2026. and was conducted by the PDA Service Consultants Roland Berger and its technical sub-contractor Worley.

Supported project development areas and key results and impact of the first PDA programme wave

The PDA support focused on tailored support within four key dimensions relevant to advance Hydrogen Valley projects to FID, including:

- **Commercial support:** H_2 and derivatives market study regarding H_2 demand and supply and willingness-to-pay, business model calibration, financing approach, refinement of financial models, offtake and go-to-market strategy
- **Technical support:** Technical validation and benchmarking, optimisation of technical concept incl. CAPEX/OPEX, power sourcing concept with focus on levelised cost of hydrogen (LCoH) improvement
- **Regulatory support:** Regulatory analysis of RFNBO-H_2 and low-carbon hydrogen regulations, Renewable Energy Directive III (RED III), EU Emission Trading System (EU ETS) and certification schemes, socio-economic impact assessments
- **Governance support:** Development of project storylines, stakeholder organisation and governance structuring, project and milestone planning

All Hydrogen Valleys could achieve via the PDA support significant progress towards FID.

Given its strong emphasis on the commercial dimension, the PDA support generated the most significant and measurable progress in this area, with PDA light Beneficiaries advancing from early-stage initiation to concept level — unlocking validated willingness-to-pay assessments, structured offtake pipelines and improved project Investment Rate of Returns (IRRs) — whilst PDA plus Beneficiaries reached feasibility and beyond, achieving concrete financial milestones such as a net present value (NPV) and project IRR improvement, alongside the initiation of active investor discussions.

On the technical side, PDA light projects progressed from high-level configurations to structured concept studies with LCoH optimisation potential of up to 10% identified, whilst PDA plus projects advanced from concept to feasibility, with cost estimation methodology upgraded from Class IV to Class III and a further 25% LCoH improvement potential mapped across more than ten technical levers.

Regulatory support served as a cross-cutting enabler across both tracks, with PDA Beneficiaries gaining foundational orientation on RFNBO and LCH frameworks as well as obtaining project-specific compliance conclusions and actionable insights into sectoral demand pull under RED III, FuelEU Maritime and ReFuel Aviation Regulation.

Governance support was primarily relevant for PDA light Beneficiaries developing large-scale, multi-component Hydrogen Valleys, where it contributed to the structuring of complex project set-ups — including consortia of 20+ sub-projects — and secured C-level commitment.

The quality and scope of the PDA support as well as the collaboration with the PDA Service Consultant Roland Berger could achieve high satisfaction across PDA Beneficiaries, underscoring the overwhelmingly positive results of the PDA support.

Insights into the state of the hydrogen sector in Europe

Through close engagement with Hydrogen Valley projects across Europe, the PDA support has yielded deep, actionable insights into the most critical dynamics shaping the hydrogen sector in Europe — revealing that well-structured offtake agreements anchored by industrial projects are the central lever for unlocking financing and that clear and binding regulation is indispensable for driving demand. Systematic techno-economic optimisation combined with revenue diversification is essential to close the persistent gap between LCoH and offtaker willingness-to-pay. At the same time, the experience underscores a need for targeted DEVEX support as development support of the PDA type has proven highly effective in bridging the DEVEX funding gap and advancing projects to the point where traditional project finance solutions can be mobilised.

Outlook on the H2V Facility activities in 2026

In 2026, the Hydrogen Valleys Facility will enter in its next phase as it further builds out its targeted set of activities designed to further accelerate the development of Hydrogen Valley projects across Europe towards FID. In April 2026, the second Call for PDA was launched. Furthermore, the self-service H2V Knowledge Centre will be expanded and the H2V Platform, the central information hub on Hydrogen Valley projects, will be relaunched. Besides that, a dedicated series of webinars and events for different target groups has been started. The aim of these interactive formats is twofold: Exclusive formats for Hydrogen Valley practitioners are aimed to foster direct exchange and knowledge sharing among Hydrogen Valleys on topics of common interest via in-person events. Furthermore, open webinars on a specific topic related to hydrogen project development and advancing hydrogen projects to FID are hosted for a wider target audience. More information is available on the H2V Facility website www.h2v.eu.

1

About the Project Development Assistance programme

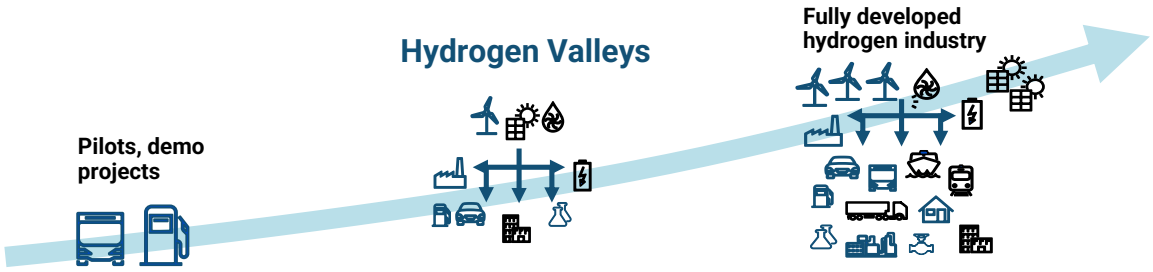
1 About the Project Development Assistance programme for Hydrogen Valleys

1.1 The Project Development Assistance programme under the Hydrogen Valleys Facility

Hydrogen Valleys – What they are and why they matter more than ever today

Hydrogen Valleys are integrated clean hydrogen ecosystems that cover a specific geography, ranging from a local or regional focus - such as industrial clusters, ports, or airports - to broader national or international regions including cross-border hydrogen corridors. Within their geographic scope, these ecosystems supply several sectors through a common hydrogen infrastructure, serving, industry, mobility and energy end uses. Hydrogen Valleys cover multiple steps in the value chain, extending from hydrogen production through storage and distribution to offtakers via various modes of transport.

FIGURE 1: **HYDROGEN VALLEYS AS ENABLERS OF A CLEAN HYDROGEN ECOSYSTEM**



Hydrogen Valleys have demonstrated to be one of the key initiatives to drive the clean hydrogen sector and ultimately the transition towards decarbonised economies. Against the recent market headwinds, they have demonstrated a notable degree of resilience and importance:

Their integrated and at the same time diversified design, combining hydrogen production, transportation and end use within a single coordinated framework, provides a more robust commercial and operational foundation than stand-alone, single-asset projects, which are more exposed when individual links in the value chain weaken.

By demonstrating hydrogen technologies in real-world conditions at meaningful scale, they systematically de-risk commercial, technological, and regulatory uncertainties, fostering a collaborative ecosystem of industry, government, and research institutions that accelerates innovation and reduces the overall cost of hydrogen deployment. The transferable knowledge and best practices generated by each Hydrogen Valley directly accelerate the development of future projects, while the combined investment volumes mobilised globally, currently exceeding EUR 134 bn, can drive economies of scale in electrolyser manufacturing and hydrogen logistics, bringing the entire sector closer to cost competitiveness.

The Clean Hydrogen Partnership and the Hydrogen Valleys Facility

The Clean Hydrogen Partnership has played a foundational and continuously evolving role in establishing Hydrogen Valleys as a globally recognised concept and a cornerstone of Europe's clean energy strategy. As such, it has brought forward numerous activities to develop and support Hydrogen Valleys over the last years. As such, it has brought forward numerous activities to develop and support Hydrogen Valleys over the last years.

The concept of Hydrogen Valleys was developed by the Clean Hydrogen Partnership, through its predecessor the FCH 2 JU, - laying the conceptual and community groundwork for what would become a globally adopted model.

Subsequently, over EUR 320 m in cumulative funding were granted for over 25 Hydrogen Valley projects in 22 countries Building on this foundation, the Clean Hydrogen Partnership developed the global H2V Platform (www.h2v.eu) — launched in 2021 and expanded into a comprehensive one-stop shop by

2023, now hosting more than 100 Hydrogen Valleys worldwide.

Recognising the evolution of the Hydrogen Valley concept and to accelerate the clean hydrogen transition in Europe by advancing a diverse portfolio of Hydrogen Valleys to investment-readiness, the Clean Hydrogen Partnership has set up the Hydrogen Valleys Facility (H2V Facility). This dedicated facility aims to unlock transformative support for Hydrogen Valleys on their way to FID, to support the European Commission's aspirational target of having 50 valleys operational or under construction in the EU by 2030. Roland Berger together with its consortium partners Worley and Inycom were mandated by the Clean Hydrogen Partnership for the set-up and implementation of the H2V Facility.

The H2V Facility delivers via three pillars dedicated non-financial support from 2025 until 2030:

- **The Hydrogen Valley Platform** features European and global hydrogen flagship projects in different maturity stages (pre-FID, under construction and in operations) and provides dedicated insights into hydrogen project development
- **The H2V Knowledge Centre** is a self-service and interaction platform for the broader hydrogen community, thereby providing dedicated content, knowledge products and formats for exchange on best-practices for projects at different pre-FID maturity levels
- **The Project Development Assistance** is directed to Hydrogen Valleys to advance them from idea to concept (PDA light programme track) and from concept to feasibility stage and ultimately to FID (PDA plus programme track)

The Project Development Assistance programme

A central pillar of the Hydrogen Valleys Facility is the PDA programme. Through PDA, the Clean Hydrogen Partnership offers targeted support to Hydrogen Valleys at different stages of maturity, helping to accelerate their development and move projects towards FID.

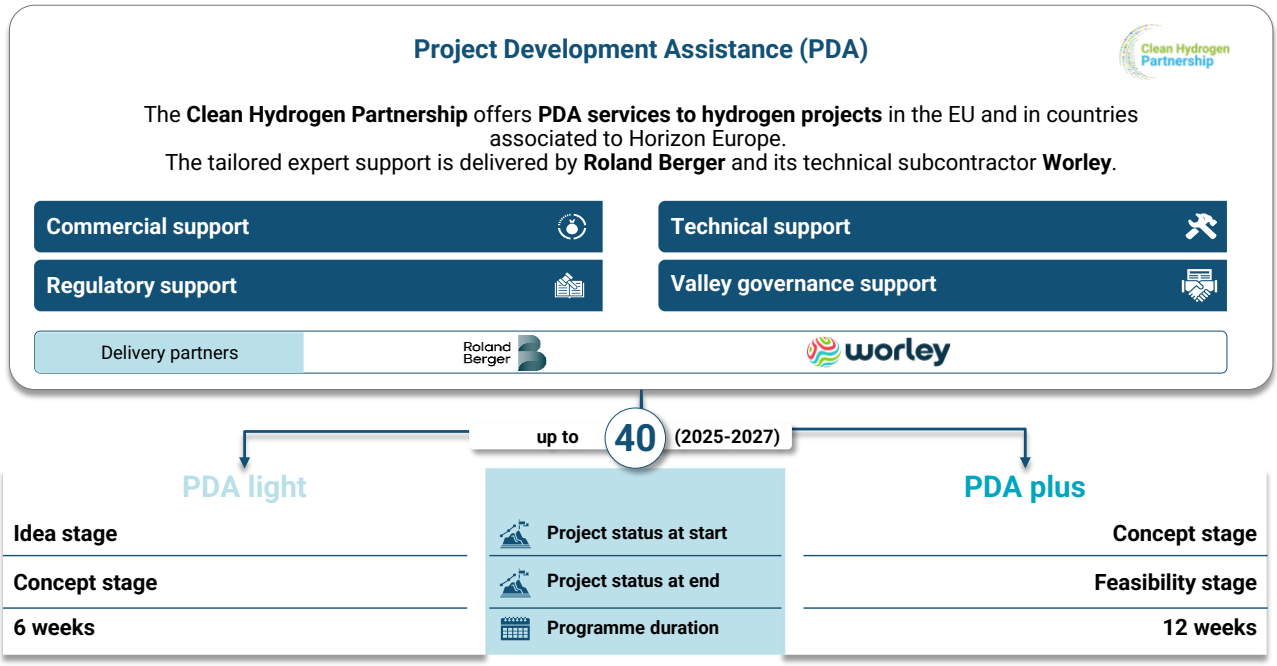
Therefore, the Clean Hydrogen Partnership launched a first Call for Applications for Project Development Assistance in July 2025 with a submission deadline until end of September 2025. The Call aimed at supporting 15 Hydrogen Valleys located in a EU member state or a country associated to Horizon Europe. The Project Development Assistance programme offers two different support tracks, tailored to the maturity of each individual Valley: PDA light and PDA plus.

- **PDA light programme**: Aimed at early-stage hydrogen projects, this track supports the development of a compelling pre-feasibility project concept and provides structured consulting, gap analysis and standardised support packages
- **PDA plus programme**: Targeted at more advanced hydrogen projects that already have a concept study in place, this track offers modular, customised assistance to progress towards the feasibility milestone and to define a detailed roadmap to FID

The PDA services focus on four key dimensions that are essential to maturing hydrogen projects to their FID:

1. **Commercial aspects**, incl. commercial structuring, business planning and financial modelling, H_2 and derivatives market analysis, offtake strategy and pricing, financing and funding
2. **Technical aspects,** incl. technical validation and benchmarking, optimisation of technical concept focused on CAPEX & OPEX, power sourcing concept with focus on the improvement of LCoH
3. **Regulatory aspects,** incl. regulatory analysis of Renewable Fuels of Non-Biological Origin (RFNBO) H_2 and low-carbon hydrogen (LCH) regulations, RED III, EU ETS and certification schemes, socio-economic impact assessment
4. **Valley governance aspects,** incl. development of project storyline, stakeholder organisation, project planning & dependencies

TABLE 1: THE PROJECT DEVELOPMENT ASSISTANCE PROGRAMME BY THE CLEAN HYDROGEN PARTNERSHIP



1.2 PDA light programme – Support for early-stage projects

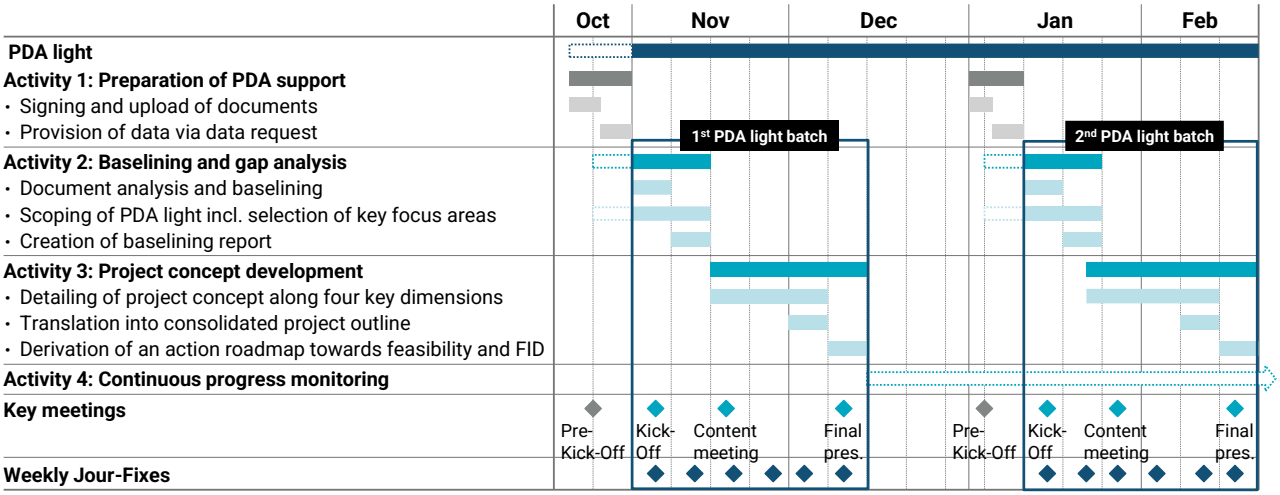
The PDA light programme is aimed at supporting early-stage hydrogen projects in advancing towards a compelling pre-feasibility project concept through structured consulting, gap analysis and standardised support packages. The total programme duration was six weeks.

The PDA light entailed a scoping and baselining phase with the PDA Beneficiary at the beginning of the programme, followed by the development of a holistic project concept report for all four PDA support dimensions.

The PDA light support was structured in a two-phase approach:

- **Baselining and scoping phase**: Initial baselining and scoping phase with PDA Beneficiary with dedicated kick-off and scoping meetings with key representatives of the PDA Beneficiary with detailed status assessment and gap analysis and scoping of the PDA light focus areas within the project concept
- **Hydrogen Valley project concept development:** Development of a holistic project concept for the Hydrogen Valley with focus on selected focus areas as defined in the scoping phase for the four PDA support dimensions, i.e., commercial, technical, regulatory and Valley governance

FIGURE 2: **PDA LIGHT TIMELINE**



1.3 PDA plus programme – Support for concept-stage projects

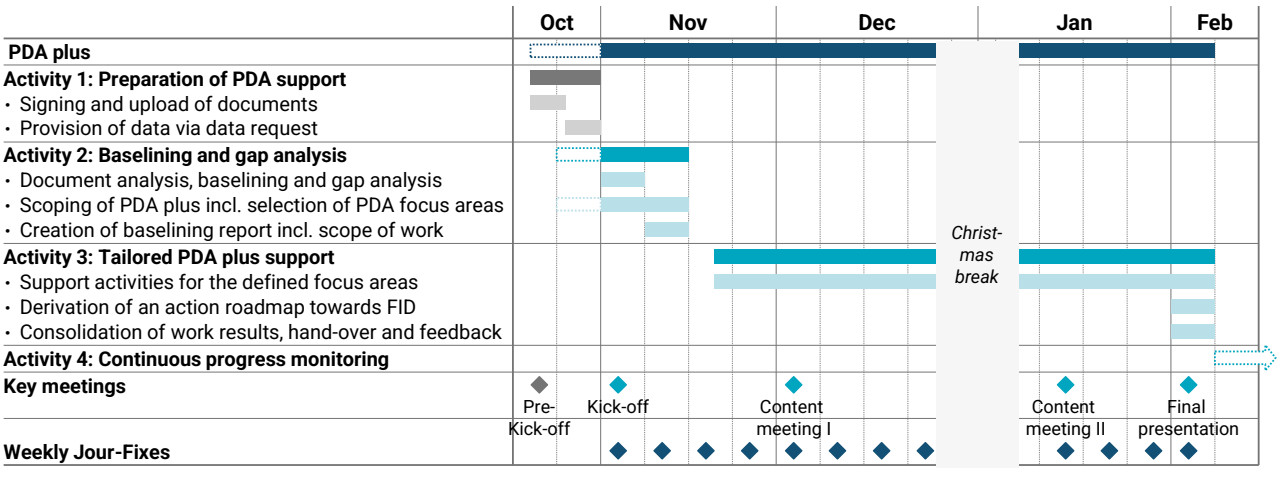
The PDA plus programme is aimed at supporting more advanced hydrogen projects that have fulfilled the two formal requirements of having a concept study in place and an envisaged Commercial Date of Operations in less than 3.5 years as of the submission deadline. The PDA plus Hydrogen Valley projects are supported with modular, customised assistance to advance towards the feasibility milestone, and a detailed roadmap to FID. The total programme duration was 12 weeks.

The PDA plus started with a c. two-week scoping and baselining phase with the PDA Beneficiary and focused in the remaining 10 weeks on tailored support on dedicated support areas related to commercial, technical, regulatory and governance aspects.

The PDA plus support was structured as follows:

- **Baselining and scoping phase**: Initial baselining and scoping phase with the PDA Beneficiary with dedicated kick-off and scoping meetings with key representatives of the PDA Beneficiary with detailed status assessment and gap analysis and scoping of the PDA plus tailored support areas within commercial, technical, regulatory and Valley governance dimensions
- **Tailored project development support:** Tailored support for the identified focus areas as defined in the baselining report

FIGURE 3: **PDA PLUS TIMELINE**



2

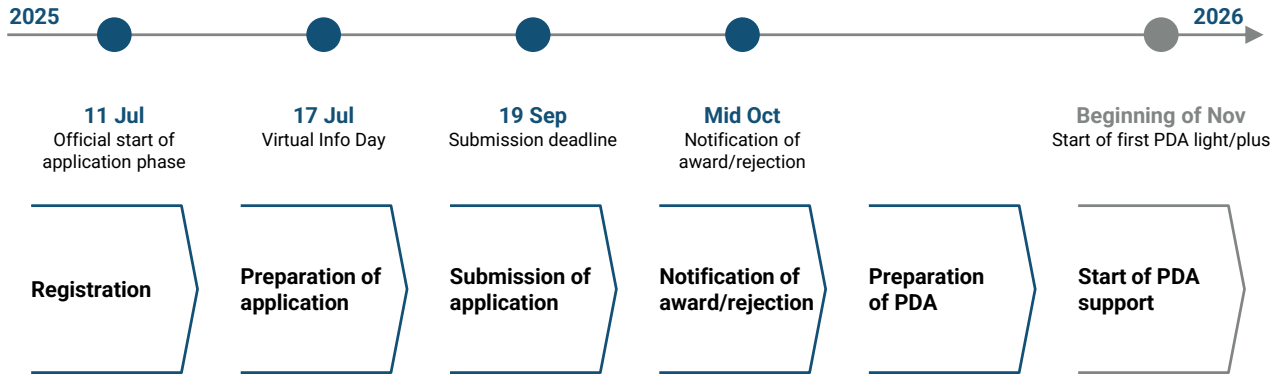
Application and evaluation process of the first Project Development Assistance wave

2 Application and evaluation process of the first Project Development Assistance wave

2.1 Application for PDA support

The application phase for the first Call for Applications for PDA support ran from 11 July 2025 to 19 September 2025 via a dedicated programme website (pda.h2v.eu). The Call documents to this Call for Applications are attached to this Report in Annex II.

FIGURE 4: **APPLICATION PROCESS OF THE FIRST CALL FOR PDA SUPPORT**



The application process was deliberately structured to minimise administrative burden whilst ensuring that the information gathered was sufficient to enable a robust and meaningful evaluation.

Of the four documents required for a complete submission, three could be compiled directly from existing project data and materials already available to applicants — a conscious design choice intended to lower the entry threshold and make the programme accessible to a broad range of project promoters, irrespective of their available development resources. The sole newly created document was a concise four-page application form, in which applicants were invited to articulate how their Hydrogen Valley project contributes to the objectives of the Clean Industrial Deal and the REPowerEU plan, and to specify the PDA support areas they wished to prioritise, accompanied by a brief explanatory rationale.

Two dedicated information formats were provided for interested applicants:

1. **FAQ section**: A comprehensive FAQ covering the Hydrogen Valleys Facility, the PDA programme, eligibility, application process, and evaluation criteria was published alongside the Call for Application documents and continuously updated throughout the application phase with responses to incoming queries
2. **Info Day (17 July 2025):** A virtual Info Day attended by approximately 150 stakeholders presented the PDA programme, application process, PDA tracks (light and plus), eligibility and award criteria, and next steps, concluding with a live Q&A session. The presentation and session recording were subsequently made publicly available on the dedicated PDA programme website

The response to the Call was both substantial and geographically diverse.

By the submission deadline of 19 September 2025, a total of 36 PDA applications had been received — a figure that significantly underscores the breadth of demand for structured project development support across the European hydrogen ecosystem. These applications originated from 18 different countries, spanning 12 EU Member States and 6 countries associated to Horizon Europe, demonstrating that the PDA programme successfully mobilised interest well beyond any single region or market and confirmed the pan-European relevance and reach of the Hydrogen Valleys Facility.

FIGURE 5: GEOGRAPHIC DISTRIBUTION OF RECEIVED APPLICATIONS FOR PDA SUPPORT

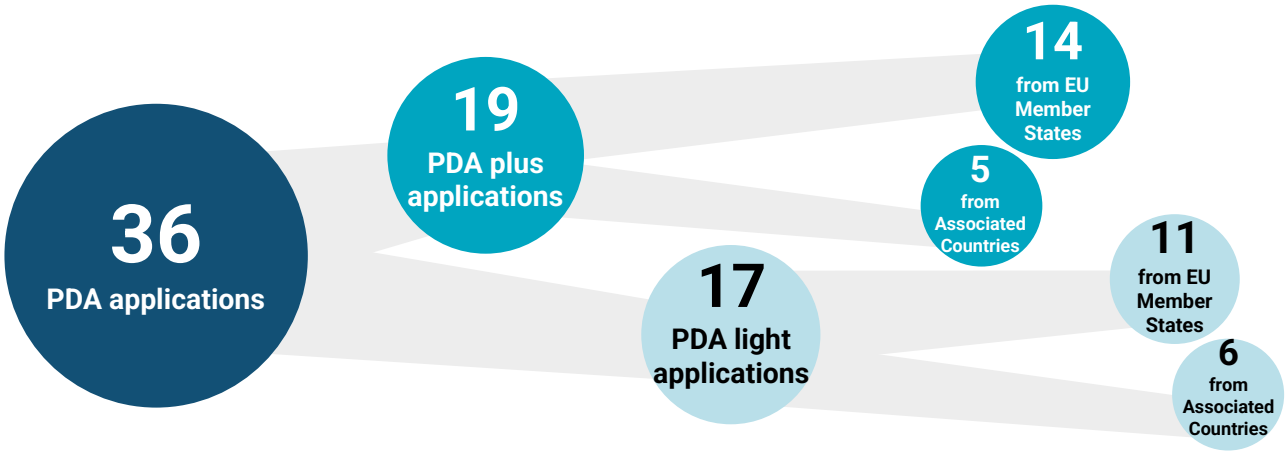
36 PDA applications

… from 18 **countries, thereof**

- from 12 EU Member States
- from 6 from Associated Countries to Horizon Europe

In terms of the type of support requested, applications were almost evenly distributed between the two available tracks: 19 applications were submitted for PDA plus and 17 for PDA light.

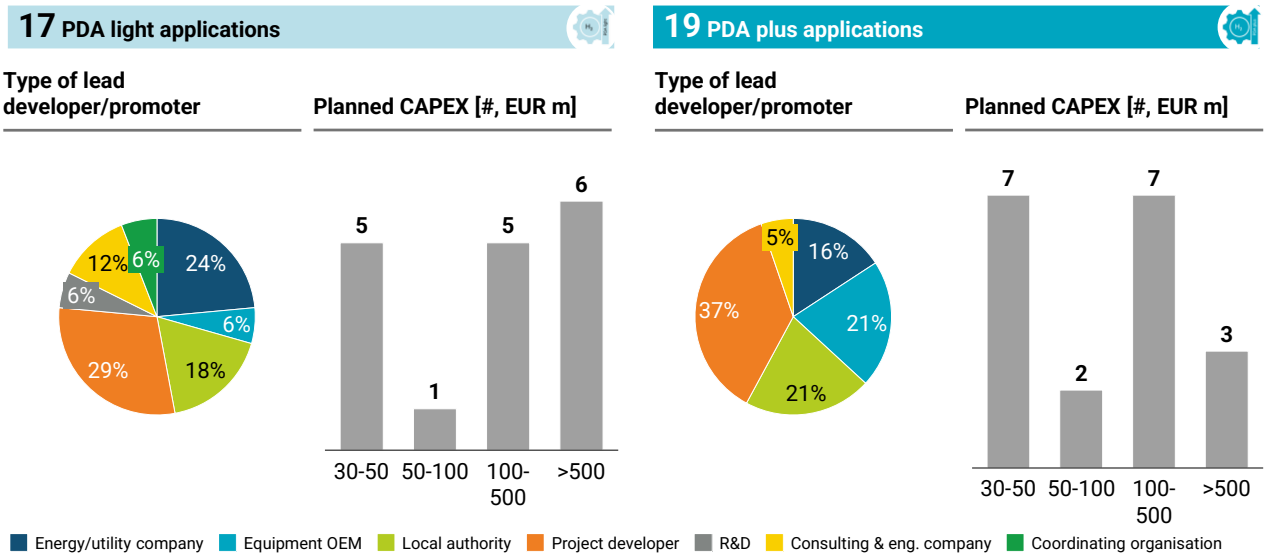
FIGURE 6: DISTRIBUTION OF PDA APPLICATIONS BETWEEN PROGRAMME TRACK AND EU VS. NON-EU



The first Call for Applications successfully reached a broad, predominantly private-sector audience, with a strong focus on large-scale hydrogen projects not yet integrated into existing Clean Hydrogen JU activities. At the submission deadline, 10% of applicants already received Clean Hydrogen Partnership funding via the small-scale or large-scale Hydrogen Valley calls and 25% were featured on the H2V Platform, confirming that the PDA programme effectively targeted projects that have so far not benefitted from the activities the Clean Hydrogen Partnership offers for Hydrogen Valleys.

The call attracted a diverse range of lead developers, spanning energy and utility companies, oil and gas majors, independent project developers, regional authorities, R&D institutions and coordinating organisations (organisations that do not develop projects directly, but act as a coordinator of various project developers within a Hydrogen Valley).

FIGURE 7: CHARACTERISTICS OF RECEIVED APPLICATIONS FOR PDA SUPPORT

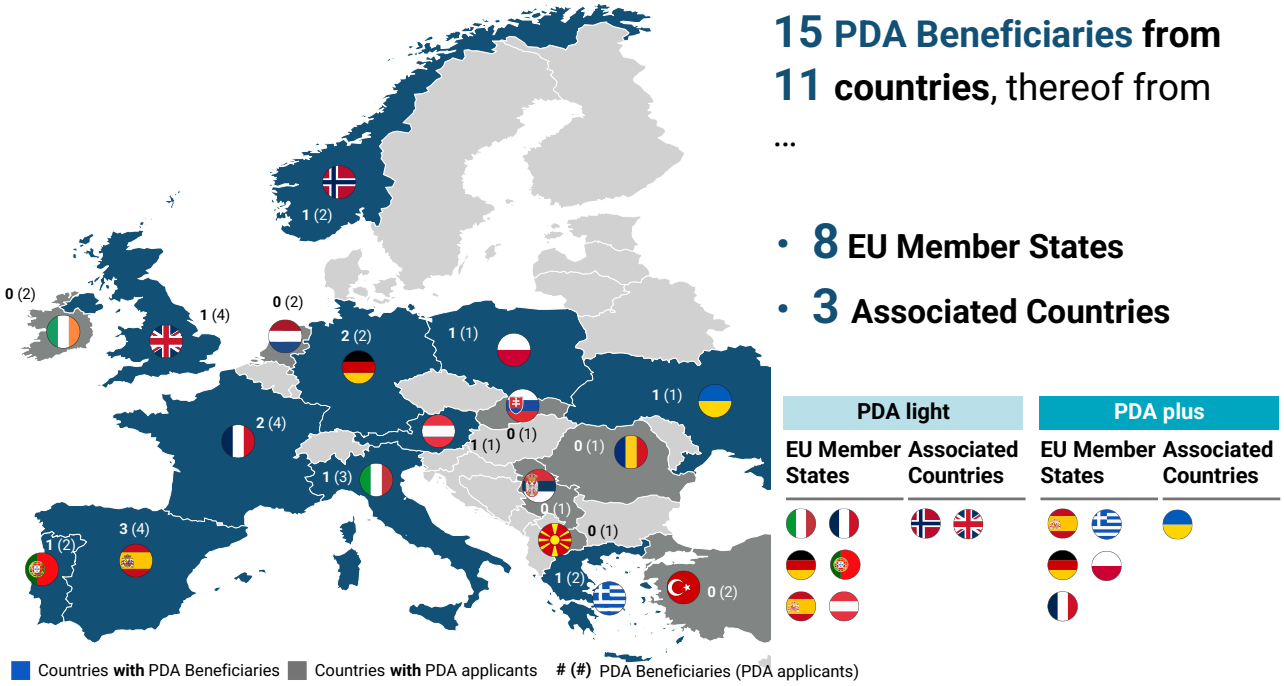


2.2 Evaluation results of the first Call for Applications

Evaluation outcome and list of PDA Beneficiaries

In total, 15 PDA applicants were awarded with PDA support.

FIGURE 8: OVERVIEW OF PDA BENEFICIARIES



The Hydrogen Valleys of these Beneficiaries are located in 11 countries, thereof 8 EU Member States and 3 countries associated to Horizon Europe countries.

The following 9 PDA light applicants were awarded with PDA light support:

TABLE 2: PDA LIGHT BENEFICIARIES

Name of Hydrogen Valley	Lead developer	Developer category	Country	Main region
Hydrogen Valley Zamora	Enertrag	Independent project developer	Spain	Leon province
HyCoast	Energy Transition Norway	Consortium organisation	Norway	Region around Bergen
RHYNE-UP	e-mobil BW GmbH	State-owned agency	Germany	Cross-border (Germany, France, Switzerland)
HydrogER	Hera SpA	Energy & utility company	Italy	Emilia Romagna
Galileu Green Hydrogen Valley	Smartenergy Portugal	Independent project developer	Portugal	Lisbon region
TAJUÑA H2	RIC Energy	Independent project developer	Spain	Madrid region
Coast 2 Coast	East Midlands Pipeline Ltd	Independent project developer	UK	East Midlands
HyNA Hydrogen Valley	Région Nouvelle-Aquitaine	Regional authority	France	Nouvelle-Aquitaine Region
HyHOPE	Wien Energie GmbH, Hydroeconomy	Energy & utility company	Austria	Cross-border (Austria, Hungary, Slovakia)

The following 6 PDA plus applicants were awarded with PDA plus support:

TABLE 3: PDA PLUS BENEFICIARIES

Name of Hydrogen Valley	Lead developer	Developer category	Country	Main region
Orange.bat	Smartenergy	Independent project developer	Spain	Valencia region
Hydrogen Valley Anklam	Enertrag	Independent project developer	Germany	Mecklenburg-Pommerania
H2SUD Vallée	Région SUD	Regional authority	France	Provence-Alpes-Côte d'Azur
North-1 Hydrogen Valley	Hellenic Hydrogen	Project developer with O&G company as major shareholder	Greece	Western Macedonia
Amber Hydrogen Valley	ORLEN S.A.	Oil & gas and integrated energy company	Poland	Pomerania region
GreenWest PtX	UDP Renewables and Hydrogen Partners	Independent project developer	Ukraine	Western Ukraine (c. 1km to Polish Border)

Evaluation process

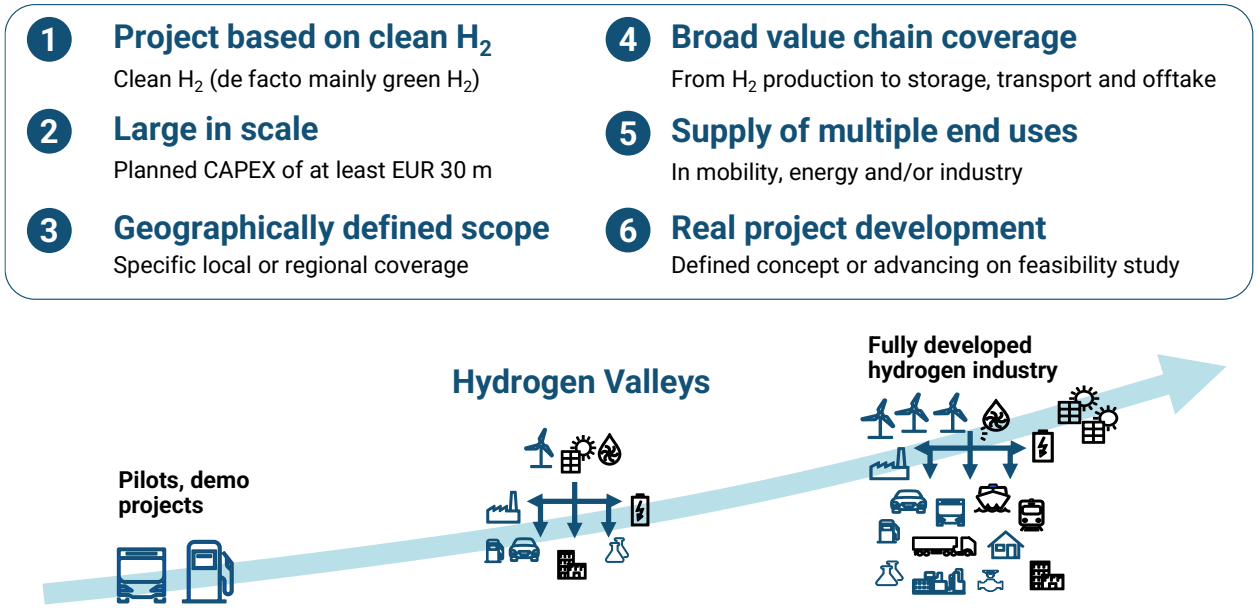
The evaluation was conducted by an Evaluation Committee consisting of experts from the Clean Hydrogen Partnership and the PDA Service Consultants Roland Berger and Worley. All applicants were first assessed on whether they fulfil all eligibility criteria. Eligible applicants were assessed regarding the four

award criteria. Applicants that were not excluded due to eligibility and scored a minimum of 5 out of 10 points per award criterion (minimum award threshold) were ranked within their respective PDA track. were evaluated and eventually added to a ranking list within their respective PDA track (either light or plus).

Eligibility criteria (pass vs. no pass)

1. Submission of application before submission deadline
2. Submission of application documents in English
3. No exclusion situation
4. Location of Hydrogen Valley project and lead developer legal entity in eligible country
5. Fulfilment of Hydrogen Valley criteria

FIGURE 9: HYDROGEN VALLEY CRITERIA



Out of 36 PDA applicants, 3 applicants did not met the eligibility criteria. The remaining 33 PDA applications were evaluated within their respective PDA tracks against the award criteria. Those PDA applications that met the minimum threshold of 5/10 in each award criterion were ranked in their respective PDA track. and ranked accordingly in and were not assessed

From 17 PDA light applications, 1 application did not meet the eligibility criteria and 4 applications did not meet the minimum award threshold. The remaining 12 applications were ranked according to their overall score, and the top 9 applications were awarded PDA light support.

From 19 PDA plus applications, 2 applications did not meet the eligibility criteria and 5 applications did not meet the minimum award. The remaining 12 applications were ranked according to their overall score and the top 6 applications were awarded PDA plus support.

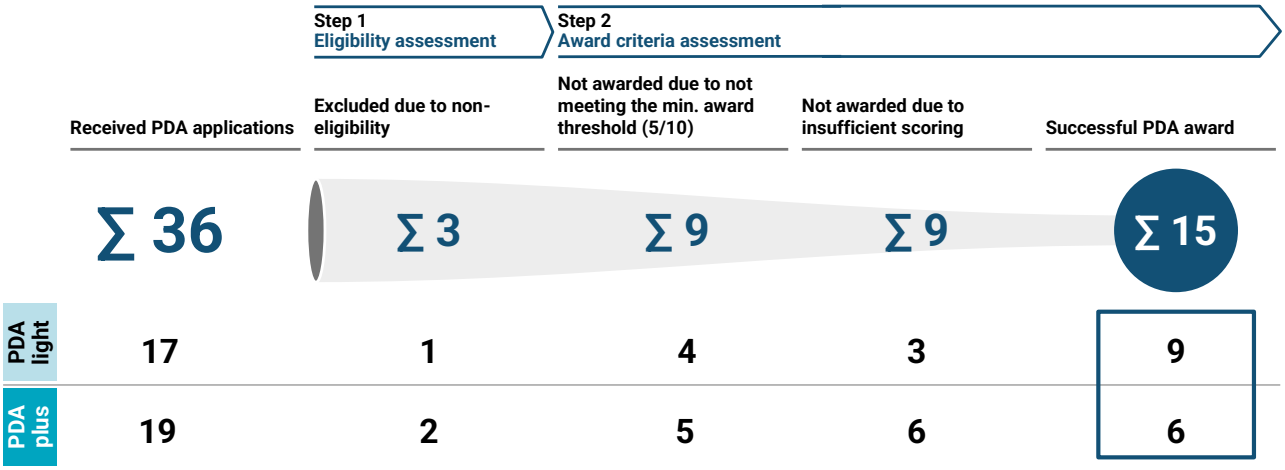
The primary reason for failing to meet the minimum threshold of the award criteria was the insufficient quality of the submitted application documents. Applicants falling below this threshold typically presented documentation that was either excessively vague and generic in nature, lacked the requisite specificity, or failed to address the information requirements explicitly set out in the award criteria

Award criteria (weighted scoring with 25% each)

1. Commercial maturity
2. Technical maturity
3. Operational maturity and governance
4. Contribution to EU objectives and PDA rationale

The result of the evaluation process was reviewed and confirmed by the Clean Hydrogen Partnership on October 10th 2025. The notification of all PDA applicants about their individual evaluation results took place on October 15th 2025.

FIGURE 10: RESULTS OF THE ELIGIBILITY AND AWARD CRITERIA ASSESSMENT



3

Key insights into the provision of the first Project Development Assistance wave

3 Key insights into the provision of the first Project Development Assistance wave

3.1 Key characteristics of the 15 PDA Beneficiaries

The 15 selected Hydrogen Valleys represent a rich and diverse cross-section of the European hydrogen ecosystem, with their lead developers spanning the full breadth of stakeholder types active in the sector.

Planned electrolyser capacity

The 15 Hydrogen Valley projects have large ambitions when it comes to planned electrolyser capacity. In total, a 3.4 GW of planned electrolyser capacity is under development by the PDA Beneficiaries, thereof 2.6 GW being developed by the 9 PDA light Beneficiaries and 800 MW being developed by the 6 PDA plus Beneficiaries. The electrolysers cover the entire spectrum, from 1 MW size to up to 500 MW.

FIGURE 11: **PLANNED ELECTROLYSER CAPACITY OF THE 15 HYDROGEN VALLEY PROJECTS [GW]**

Type of lead developers and planned investment volume

The planned investment volume of the PDA Beneficiary projects is c. EUR 10.3 bn.

Out of this total investment volume c. EUR 8.9 bn are related to the 9 PDA light projects and c. EUR 1.4 bn are related to the 6 PDA plus projects.

FIGURE 12: **PLANNED TOTAL INVESTMENT VOLUME OF THE 15 HYDROGEN PROJECTS [EUR BN]**

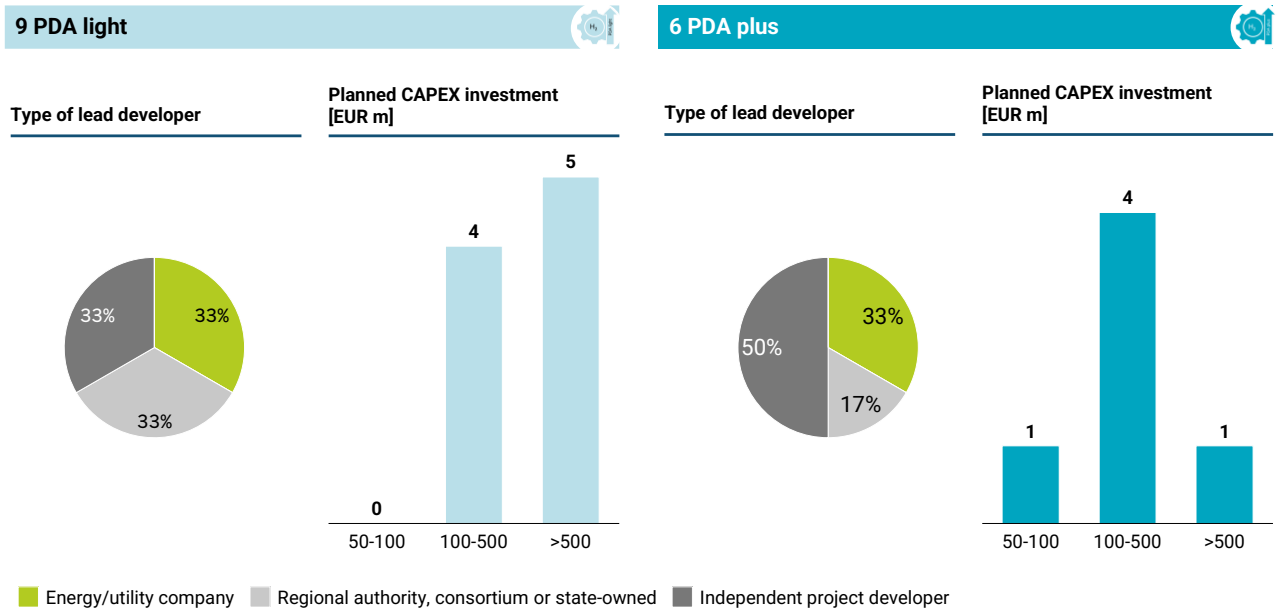
The total investment volume is mainly driven by 3 large-scale projects in the PDA light cohort that exceed EUR 1 bn in planned CAPEX investment.

The majority of PDA light projects exceed EUR 500 million in planned capital expenditure, placing them firmly in the category of flagship infrastructure investments. PDA plus projects are similarly ambitious, with most ranging between EUR 100 million and EUR 500 million in projected CAPEX — a scale that underlines the significant economic weight and investment mobilisation potential of the supported portfolio as a whole.

Across the cohort, project leadership is assumed by energy and utility companies bringing large-scale operational expertise, regional authorities and state-owned agencies anchoring projects in public-interest mandates, consortium organisations coordinating multi-partner value chains, and independent project developers driving commercially oriented development agendas.

Within the PDA light cohort, these three broad stakeholder categories are represented in equal shares, reflecting the programme's success in attracting a genuinely diverse range of project promoters at the earlier stages of development. The PDA plus cohort presents a more concentrated picture: here, independent project developers account for half of all lead developers, underscoring the comparatively strong commercial drive and development sophistication that characterises more advanced-stage projects

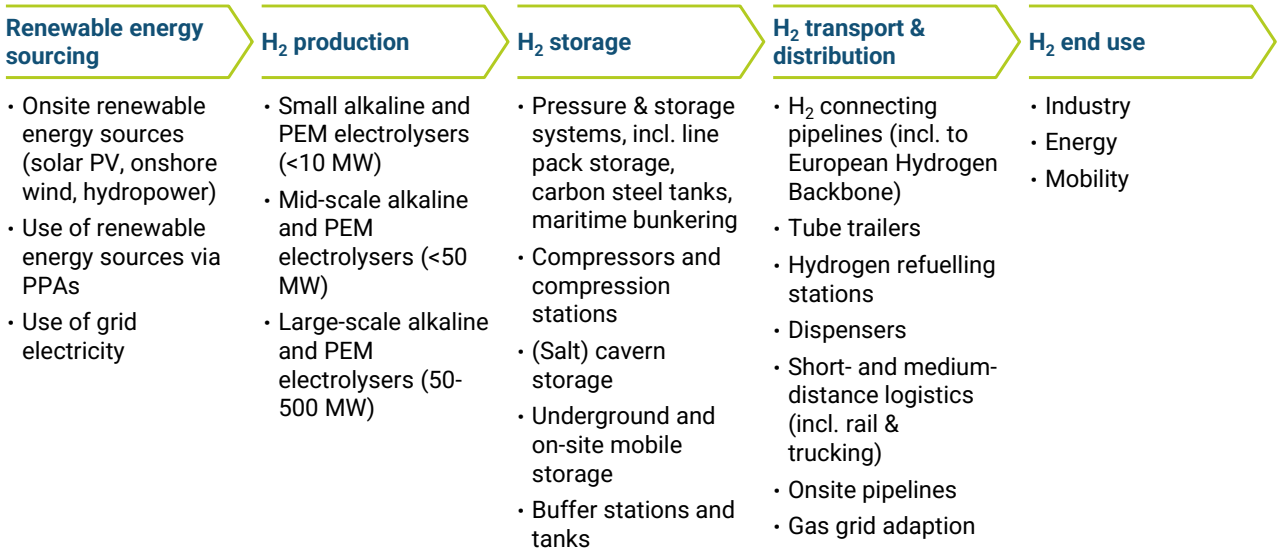
FIGURE 13: **TYPE OF LEAD DEVELOPER AND CAPEX RANGE OF PDA BENEFICIARY HYDROGEN VALLEY PROJECTS**



Hydrogen value chain coverage

The 15 supported Hydrogen Valley projects are at the forefront of building Europe's hydrogen industry as they develop a broad variety of assets along the entire hydrogen value chain from renewable energy, hydrogen production, hydrogen storage, hydrogen transport and distribution and hydrogen end uses in industry, energy and mobility.

FIGURE 14: AGGREGATED OVERVIEW OF HYDROGEN VALUE CHAIN ASSETS



All 15 PDA Beneficiaries are engaged along the entire hydrogen value chain, either directly or via their consortium partners. While the supported independent project developers tend to focus on the upstream part of the value chain from renewable energy to H_2 and derivatives production and storage, larger players, incl. energy and utility companies and oil and gas companies additionally cover the midstream part and in some cases even serve as a significant offtakers of the produced hydrogen.

In terms of **renewable energy**, the supported Hydrogen Valleys plan to use either onsite renewable energy sources (solar PV, onshore wind, hydropower), renewable energy sources via Power Purchase Agreements (PPAs) or source their energy directly from the grid. Most Hydrogen Valleys plan a blended energy mix by combining onsite assets or PPAs with electricity from the grid. Three Hydrogen Valleys develop the renewable energy assets directly, while the other 12 PDA Beneficiaries source their renewable energy from third parties or other Hydrogen Valley partners.

Each of the 15 PDA Beneficiaries develops at least a **hydrogen production** asset. The total electrolyser size per project ranging between 10 MW and up to 800 MW across various locations and project developers within a Hydrogen Valley. Most PDA Beneficiaries plan to either phase their electrolysers or upscale existing developers in later project phases. The planned electrolyser technologies are either alkaline or PEM electrolysers with at least three project planning to combine various technologies.

All Hydrogen Valleys furthermore will have an integrated **hydrogen storage** system ranging from pressure systems, compressors, compression stations and on-site compression, buffer tanks, steel tanks, underground salt caverns, trailers, maritime bunkering hubs and other line pack storage elements. The storage of the hydrogen typically takes place onsite or is being transported via short pipelines to nearby storage locations.

While most of the PDA Beneficiaries will directly operate the hydrogen production and storage assets, the **hydrogen transportation and distribution** assets are mostly developed either by the PDA Beneficiary and other Hydrogen Valley consortium partners or third parties. The hydrogen transportation and distribution infrastructure consists in hydrogen pipelines, trailers, hydrogen refuelling stations, dispensers and other local distribution and logistics assets. At least four projects plan to either develop by themselves or by Hydrogen Valley partners and third parties hydrogen pipelines that connect them to the European Hydrogen Backbone. The planned pipelines range from short onsite pipelines of a few hundred metres, most of them with the purpose to transport the hydrogen to onsite hydrogen derivative production assets, local connection pipelines with up to 10 km, regional medium-distance pipelines with up to 80 km and long-distance pipelines of up to 650 km. The pipeline network to be attributed with the 15 Hydrogen Valley projects will be a mix of newly built and repurposed pipelines. The Hydrogen Valleys that focus on road or maritime mobility end uses particularly develop mobility-related hydrogen transportation and distribution equipment, including tube trailers,

hydrogen refuelling stations, dispensers and truck loading bays. In contrast to the hydrogen pipeline network, the mobility-related transportation assets are mostly being developed by the PDA Beneficiaries themselves.

All PDA Beneficiaries plan to serve at least two of the three overarching **hydrogen end uses**, i.e., industry, mobility and energy, underlining the multi-sector character of each Hydrogen Valley project.

FIGURE 15: **HYDROGEN VALUE CHAIN COVERAGE OF PDA BENEFICIARIES**

	Hydrogen Valley	Lead developer	Renewable energy sourcing[1]	H_2 production	H_2 storage	H_2 transportation & distribution	H_2 end use
			H_2 value chain coverage				
PDA plus	North-1	Hellenic Hydrogen	Solar PV, onshore wind Grid electricity	50 MW electrolyser	Temporary H_2 buffer storage, steel & high-pressure storage	H_2 connecting pipeline	Mobility, energy
PDA plus	Amber Hydrogen Valley	Orlen	Hydropower, solar PV, onshore wind	6 electrolysers with > 500 MW in total	Various pressure, compressors & storage systems	>13 tube trailers, >5 HRS in Gdynia and Gdansk	Industry, mobility
PDA plus	H2SUD	Region SUD	Solar PV, onshore wind	6 electrolysers with c. 107 MW in total	6 kt cavern storage 3 mobile containers	H_2 pipelines, 6 HRS, 3 dispensers, on-site distribution	Industry, mobility
PDA plus	Anklam	Enertrag	Solar PV, onshore wind	20 MW electrolyser	Various buffer tanks, storage & compressors	Short onsite pipeline	Industry, mobility
PDA plus	Orange.bat	Smartenergy	Solar PV, onshore wind	100 MW electrolyser	H_2 compressor, pressure regulat., metering, nitrogen storage	Local pipelines Hydrogen backbone, HRS	Industry, mobility, energy
PDA plus	GreenWest	Hydrogen Partners, UDP Renewables	Solar PV, onshore wind	50 MW electrolyser (1st phase)	Various storage & pressure systems	Central European Hydrogen Corridor, trucks	Industry, mobility, energy
PDA light	Zamora	Enertrag	Solar PV, onshore wind	100 MW electrolyser	Compression station, H_2 storage	H_2 pipeline H2Med pipeline/ EHB	Industry, mobility
PDA light	HyCoast	Energy Transition Norway	Hydropower	5 electrolysers with c. 630 MW in total	Maritime bunkering hubs (3 sites)	Gas grid adaptation	Industry, mobility, energy
PDA light	RHYNE-UP	e-Mobil BW	Solar PV, onshore wind, Grid electricity	Various electrolysers with c. 159 MW in total	Various storage, compression & pressure systems	Local H_2 pipelines, rail, truck, container trailers, HRS	Industry, mobility, energy
PDA light	HydrogER	Hera SpA	2 agrivoltaic installations, solar PV, onshore wind	2 electrolysers with 67.5 MW in total	Buffer storages On-site compression	171 km H_2 pipeline, EHB connection, truck loading bays	Industry, mobility
PDA light	Galileu	Smartenergy	Solar PV, onshore wind Grid electricity	2 electrolysers with 545 MW in total	Various storages, incl. carbon steel tanks	Short-distance logistics & H_2 pipeline connection	Industry, mobility
PDA light	TAJUNA H2	RIC Energy	Solar PV, onshore wind	250 MW electrolyser	Onsite H_2 storage	H_2 pipeline integration infrastructure	Industry, mobility
PDA light	Coast 2 Coast	East Midlands Pipeline Ltd	Solar PV, onshore wind, waste-to-H_2 Grid electricity	4+ electrolysers with up to 50 MW in total	Linepack storage asset (6k m^3)	63 km repurposed H_2 pipeline, lateral pipes, HRS	Industry, mobility
PDA light	HyNA	Région Nouvelle-Aquitaine	Solar PV, onshore wind, waste-to-H_2	Various electrolysers with 800 MW in total, natural H_2	Underground and on-site mobile storage	c. 650 km H_2 pipeline network, HRS, & others	Industry, mobility, energy
PDA light	HyHope	Wien Energy, Hydroeconomy	Solar PV, onshore wind Grid electricity	3 electrolyser, in total c. 27.5 MW	H_2 storage, tailer filling stations	c. 5 km H_2 pipeline, HRS, gas grid injection	Industry, mobility, energy

1) Not part of Hydrogen Valley definition as per Call for Applications

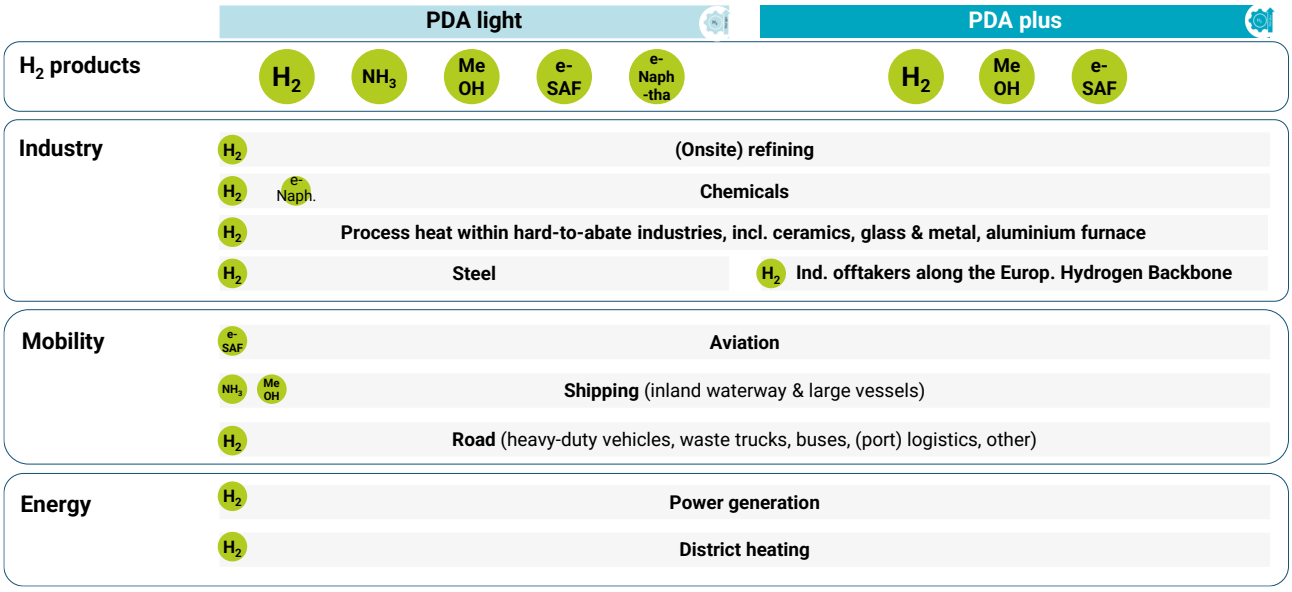
Covered directly by lead developer | Covered by other members of the Hydrogen Valley/third parties | Covered by both

Hydrogen products and planned end uses

All 15 PDA Beneficiaries will produce green and/or clean hydrogen via electrolysis.

The produced hydrogen is directed primarily to industrial and mobility applications, while only one third of all PDA Beneficiaries plan with energy end uses for their produced hydrogen.

FIGURE 16: **AGGREGATED OVERVIEW OF PLANNED HYDROGEN PRODUCTS AND END USE SEGMENTS**



The end uses are closely tied to the specific hydrogen-based product(s) of the individual Hydrogen Valleys (pure hydrogen vs. derivatives and by-products such as e-SAF, e-Ammonia, e-Methanol and e-Naphtha).

While 7 projects have hydrogen as only product, 9 out of the 15 Hydrogen Valley projects plan to produce additionally a hydrogen derivative, three of them even more than one derivative:

3 Hydrogen Valley projects will use a part of the produced hydrogen for e-Methanol production

6 Hydrogen Valley projects additionally produce e-SAF, thereof 2 with additional e-Naphtha production

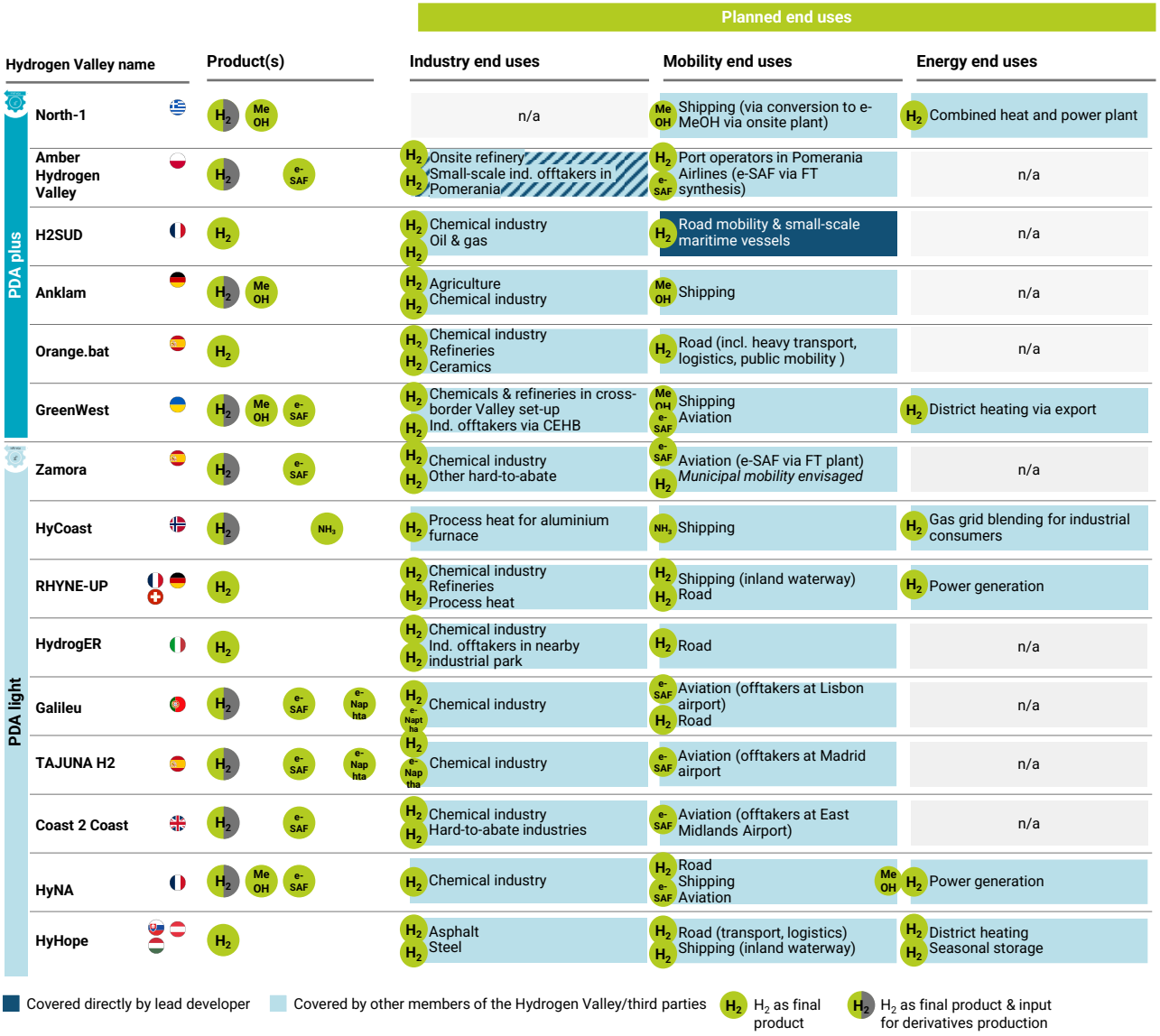
1 Hydrogen Valley project plans to use a part of the hydrogen output for ammonia production

As hydrogen is used both as final product and as a feedstock for derivative fuels, it is a key enabler for downstream decarbonisation across a multitude of end use segments:

- 14 Hydrogen Valleys plan with **industrial offtakers**, thereof in refining, chemicals, hard-to-abate industries, incl. glass and metal, steel and process heat for ceramics and aluminium furnace
- 15 Hydrogen Valleys plan with **mobility end users**, mostly via hydrogen derivatives. This includes aviation (e-SAF), shipping (e-Methanol and ammonia) as well as road, incl. heavy-duty vehicles, waste trucks, buses, (port) logistics (pure hydrogen)
- 6 Hydrogen Valleys plan with the **energy end use** segments power generation and district heating

In terms of planned end uses per PDA programme, PDA plus projects mostly aim for refinery and chemical offtake in the industry end use and target shipping and road in the mobility end use. PDA light Hydrogen Valley projects, in contrast, still have a broader approach towards envisaged offtake with most of them aiming to cover all three end uses. As four of the PDA light projects also produce e-SAF, the aviation end use segment plays a crucial role in their offtake strategy. Furthermore, chemicals and hard-to-abate industries are envisaged for offtake of hydrogen and its derivatives.

FIGURE 17: **PLANNED HYDROGEN PRODUCTS AND END USES OF PDA BENEFICIARIES**



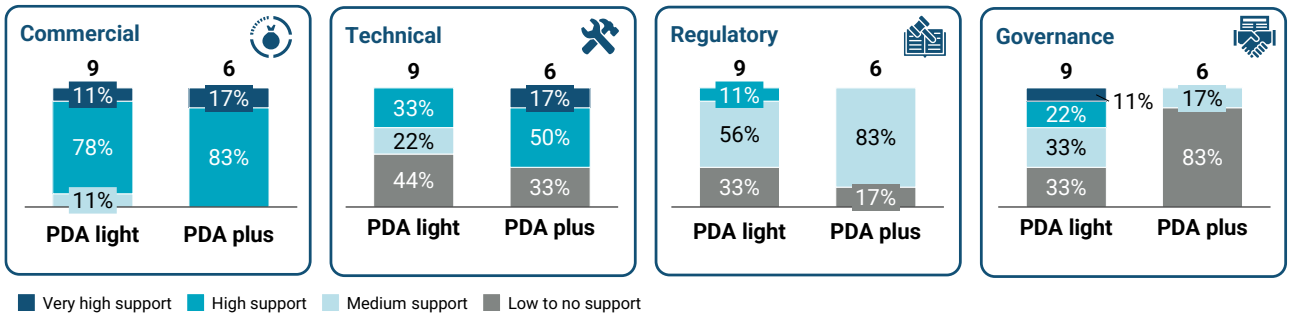
3.2 Supported project development areas

The PDA support for both PDA programme tracks spanned across four key dimensions relevant to mature hydrogen projects to their FID, i.e., commercial, technical, regulatory and governance.

PDA support areas across the two PDA programmes

At the beginning of the PDA support and based on a joint scoping as well as a document- and interview-based gap analysis across all dimensions relevant for FID, the individual PDA support areas were defined and aligned with the PDA Beneficiary.

FIGURE 18: **DISTRIBUTION OF PDA SUPPORT AREAS [% OF PDAS]**



Across the first PDA cohort, the **commercial dimension** emerged as the overwhelmingly dominant focus of tailored support, with almost all Hydrogen Valleys receiving a high to very high intensity of commercial assistance relative to the other three dimensions.

This reflects the structural reality of hydrogen project development: without a robust commercial foundation — encompassing a credible business case, sound commercial structuring and firm offtake commitments — projects cannot progress to investment readiness, regardless of their technical or regulatory maturity. Commercial support was therefore not merely a priority, but an indispensable prerequisite for meaningful project advancement across the entire PDA Beneficiary cohort.

The intensity and nature of **technical support** varied considerably between the two tracks. Within the PDA plus cohort, four out of six PDA plus Beneficiaries received high to very high technical assistance, building on pre-existing concept studies to refine, validate and optimise specific technical dimensions of their project designs.

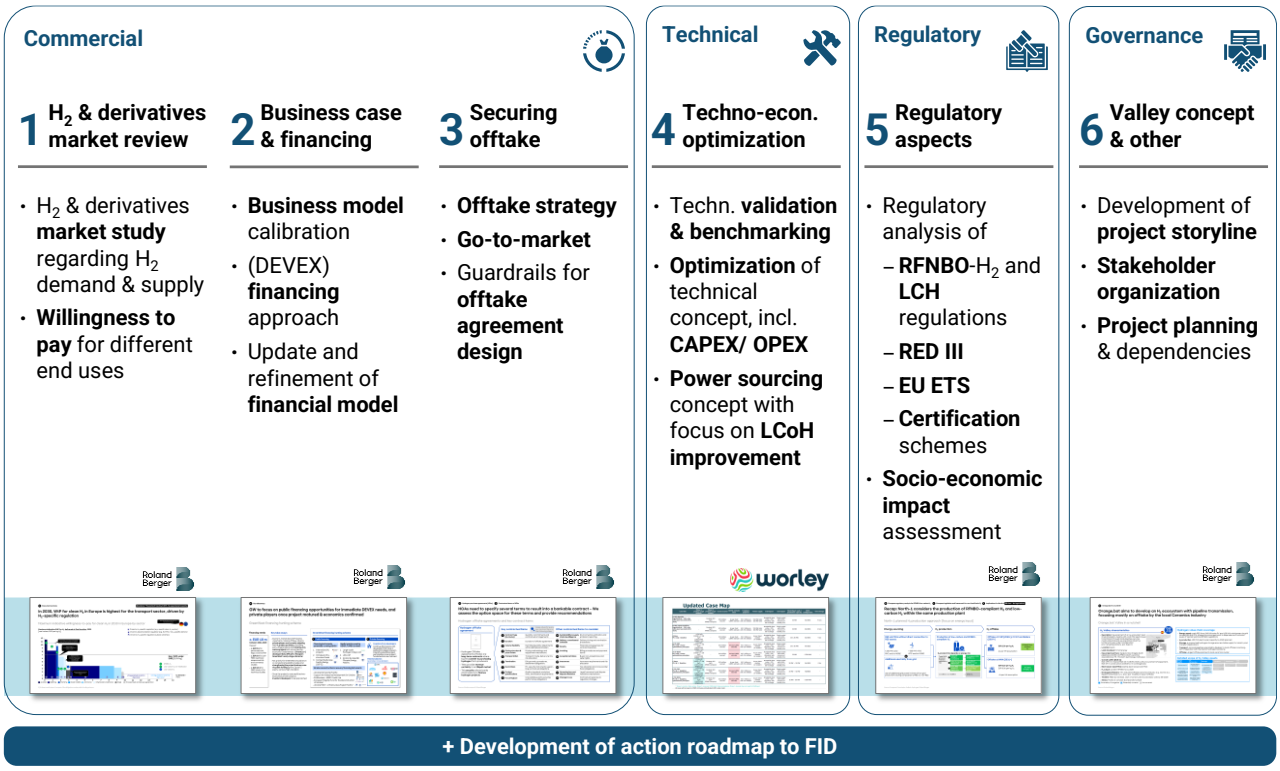
For PDA light Beneficiaries, technical support was of comparatively lower intensity, reflecting both the earlier stage of technical concept development typical of these projects and the deliberate sequencing logic of the programme, which recognises that deep technical detailing is more appropriately pursued at later phases of the development pathway.

Regulatory aspects, in particular the implications of RFNBO-H_2 and low-carbon hydrogen EU legislation emerged as critical cross-cutting topic for virtually all Hydrogen Valleys, and most acutely for PDA plus Beneficiaries. Given its influence across both the technical dimension through product qualification requirements and energy sourcing constraints, and the commercial dimension, through its implications for hydrogen demand dynamics and offtaker willingness-to-pay, regulatory support was in most cases systematically integrated into the broader advisory work rather than treated as a standalone module.

The **governance dimension** was particularly relevant for PDA light Beneficiaries, however at varying intensity in terms of the requested support. In large-scale, multi-stakeholder Hydrogen Valleys — particularly those led by coordinating authorities rather than single project developers — governance assistance was highly significant, covering stakeholder management, project scoping and structuring, and the further development of consortium arrangements.

PDA plus Beneficiaries, by contrast, had in most cases already progressed well beyond this stage: their project organisations were considerably more advanced, with clearly defined stakeholder roles and established consortium structures, and two of the individual project developers had already incorporated Special Purpose Vehicles — a further indicator of the comparatively high organisational maturity that characterises this cohort.

FIGURE 19: SELECTED PDA SUPPORT AREAS



Selected PDA support areas

Although all PDAs were tailored to the specific circumstances and specifics of a given Hydrogen Valley, various common patterns in terms of requested PDA support could be observed across all four PDA dimensions.

In the **commercial dimension**, the PDA support mostly centred around three key topics, namely

1 **Hydrogen and derivatives market assessment:** Analysis of the current and future hydrogen and hydrogen-derivative (e.g., ammonia, methanol, e-fuels) markets, including expected production volumes and demand by sector, regional imbalances and emerging trade flows as well as of what various end use segments within industry, mobility and energy are willing to pay for low-carbon and green hydrogen and its derivatives

2 **Business case structuring and financing:** The support around the financials focused on three sub-aspects, i.e., a) Refinement of the commercial model of the Hydrogen Valley project with the definition of roles of different project stakeholders along the hydrogen value chain and risk-sharing approaches, b) Set-up, refinement and optimisation of the financial model incl. key underlying assumptions with a view on the LCoH calculation, the financial statement (profit and loss, cash flow analysis, balance sheet) as well as capital structuring and c) Development of a financing strategy and approach with a particular focus on DEVEX-related funding instruments and subsidy schemes at EU, national and regional level

3 **Securing offtake**: Definition of project-specific key contractual items incl. acceptable option space for bankable offtake agreements, review of existing offtake and development of recommendations with a view on non-recourse project financing conditions and analysis of recent offtake agreements in the hydrogen and derivatives market with a view on prices, volumes and other key terms

Despite covering the largely the same areas of support, the covered aspects differed between PDA light and PDA plus Beneficiaries: While PDA light Beneficiaries were more interested in the understanding of the hydrogen and derivatives market as well as on how to structure and set up their business case and corresponding offtake, the support for PDA plus Beneficiaries additionally extended to the prioritisation of different offtake segments, the detailing and refinement of their financial model, also based on the technical optimisation, and a detailed review of already (pre-)negotiated offtake terms.

The **technical support** was focused around various aspects related to the techno-economic optimisation

of the Hydrogen Valley concept, upstream asset sizing and the renewable power sourcing. Specifically, the technical concepts provided by the PDA Beneficiaries were challenged and benchmarked against reference projects and deviations and recommendations for cost improvements were highlighted. Furthermore, the technical concept as a whole was optimised, thereby evaluating units such as outside battery limit (OSBL) scope, interconnections and interfaces, utility requirements, verification of material and energy flows, process yields and system interactions with a focus on improving the Engineering Design and System Integration. Technical risk assessments were conducted based on which a risk assessment matrix with a qualitative risk scoring and a red flag risk register were created. An important technical assessment for the PDA plus Beneficiaries was the validation and refinement of the power sourcing concept: Based on the configurational studies of the PDA Beneficiary, the optimum renewable energy asset and electrolyser configuration for cost-effective hydrogen production was derived. The optimisation exercise with the simulation of different asset configuration cases took place based on hourly profiles of renewable energy and grid electricity inputs and prices and took into account additional hydrogen storage and selected cases with battery energy storage systems (BESS).

While the PDA light support in the technical dimension was more focused on the challenging of assumptions and benchmarking of initial CAPEX and OPEX estimates, the PDA plus support was mainly centred on cost optimisation with a focus on the improvement of the LCoH and the refinement of the power sourcing concept.

The **regulatory support** entailed regulatory analyses on various aspects on RFNBO- and low-carbon hydrogen requirements. Being closely related to the market assessment, one part of the regulatory support focused on the regulatory drivers for the uptake of green and low-carbon hydrogen. Therefore, the relevant hydrogen-specific legislation, incl. RED III, the ReFuel Aviation Regulation, the FuelEU Maritime Regulation and the recent proposals of the International Maritime Organization (IMO) were analysed, in particular regarding their implications for the uptake of hydrogen in the relevant end use segments. Furthermore, the legislation relevant for the decarbonisation (EU ETS) of end uses was analysed regarding the emission allowances per sector and the expected carbon price development. Additional regulatory support focused on the assessment of the relevant certification and Guarantees of Origin schemes and their requirements as well as the requirements for RFNBO- and low-carbon hydrogen as per EU Delegated Acts.

Both PDA light and PDA plus Beneficiaries expressed significant interest in clarifying the implications of the recently introduced Delegated Act on low-carbon hydrogen. Specifically, their inquiries focused on the established thresholds for permissible greenhouse gas (GHG) emissions and the regulatory requirements governing grid-sourced electricity.

The **governance-related support** focused on several different aspects relevant for project planning, project structuring and stakeholder management. One important support aspect consisted in the formulation of a more coherent and persuasive narrative of the Hydrogen Valley project tailored to the interest of investors, regulatory authorities and local stakeholders as well as the development of a dedicated project presentation summarizing the project concept, project stakeholders, key financials and other investment highlights. Further concept support was provided with the establishment of governance and stakeholder structuring, including by formalising roles, responsibilities and decision-making frameworks among Valley partners. Per PDA, a holistic timeline to FID was worked out, considering critical milestones and essential interdependencies such as permitting and infrastructure requirements.

While the governance and stakeholder structuring aspects were more requested by the PDA light Beneficiaries, the limited support that was provided in this dimension to the PDA plus Beneficiaries was centred around the development of a convincing project concept.

3.3 Organisation of work and PDA delivery

The PDAs for the 15 PDA Beneficiaries were delivered by specialised teams from the PDA Service Consultants Roland Berger and Worley that were mandated by the Clean Hydrogen Partnership under the H2V Facility for the provision of the PDA support.

Each PDA Beneficiary team had one dedicated PDA Service Consultant team composed of experts from Roland Berger and, if the PDA also entailed a technical focus, experts from Worley. The Roland Berger and Worley expert teams were steered by long-standing, experienced Partners with in-depth knowledge and expertise in clean technologies and hydrogen.

PDA light delivery

The delivery of the 9 PDA lights was scheduled for a period of 6 weeks and took place in two batches with

the first batch of four PDA lights delivered from November to December 2025 and the second batch of the remaining five PDAs delivered between January 2026 and mid-February 2026.

In the first one to two weeks of the PDA light support, a baselining and status assessment took place with the aim to determine the Hydrogen Valley status in the four dimensions commercial, technical, regulatory and governance and to define the focus areas for the PDA light support. In the core delivery period thereafter, a Concept Report of the Hydrogen Valley along all four PDA dimensions as well as an in-depth assessment for the defined focus topics was produced. The last week of the PDA support was concluded with the development of an action roadmap towards FID with a detailed milestone planning.

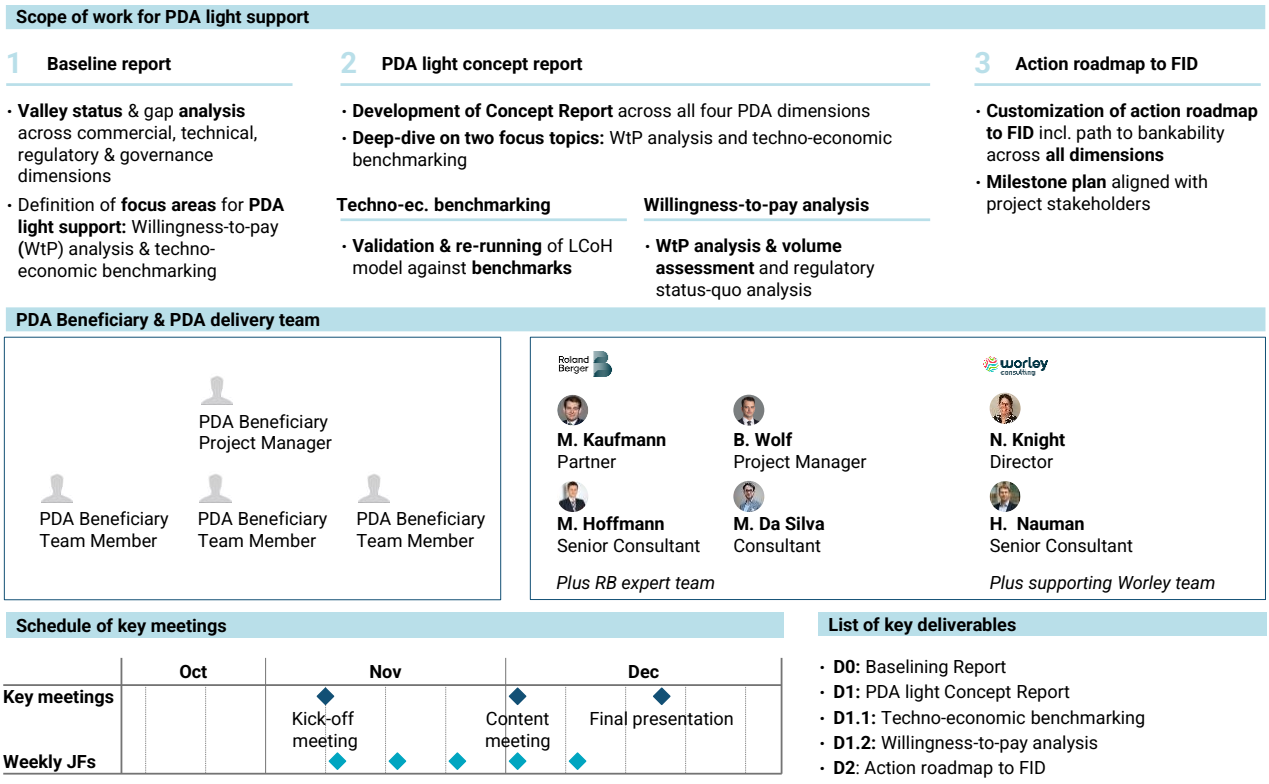
On a weekly basis, Jour-Fixes took place to align on the progress report and any clarification needs. In the fourth week of the PDA support, a dedicated content meeting to discuss the interim results of the PDA support took place.

At the end of the PDA light support and as part of the final presentation, all deliverables were handed over to and discussed with the PDA Beneficiary team.

The key PDA light deliverables per PDA light Beneficiary included:

- A c. 20-page Baselining Report
- A c. 40-50-page Concept Report incl. Hydrogen Valley-specific content deep-dives
- A c. 3-4-page action roadmap to FID

FIGURE 20: **PDA LIGHT DELIVERY (EXAMPLE)**



PDA plus delivery

The delivery of the 6 PDA pluses was scheduled for a period of 12 weeks and took place between beginning of November 2025 to beginning of February 2026.

In the first two weeks of the PDA plus support, a baselining and status assessment took place with the aim to determine the Hydrogen Valley status in the four dimensions commercial, technical, regulatory and governance and to define tailored support areas for the PDA plus support. In the 10-week delivery period thereafter, these PDA plus modules were worked out as per aligned scope of work. At the end of each PDA plus module, a content meeting together with the PDA plus Beneficiary took place to present the results and to align on the findings and conclusions. The last week of the PDA support was concluded with the development of an action roadmap towards FID with a detailed milestone planning.

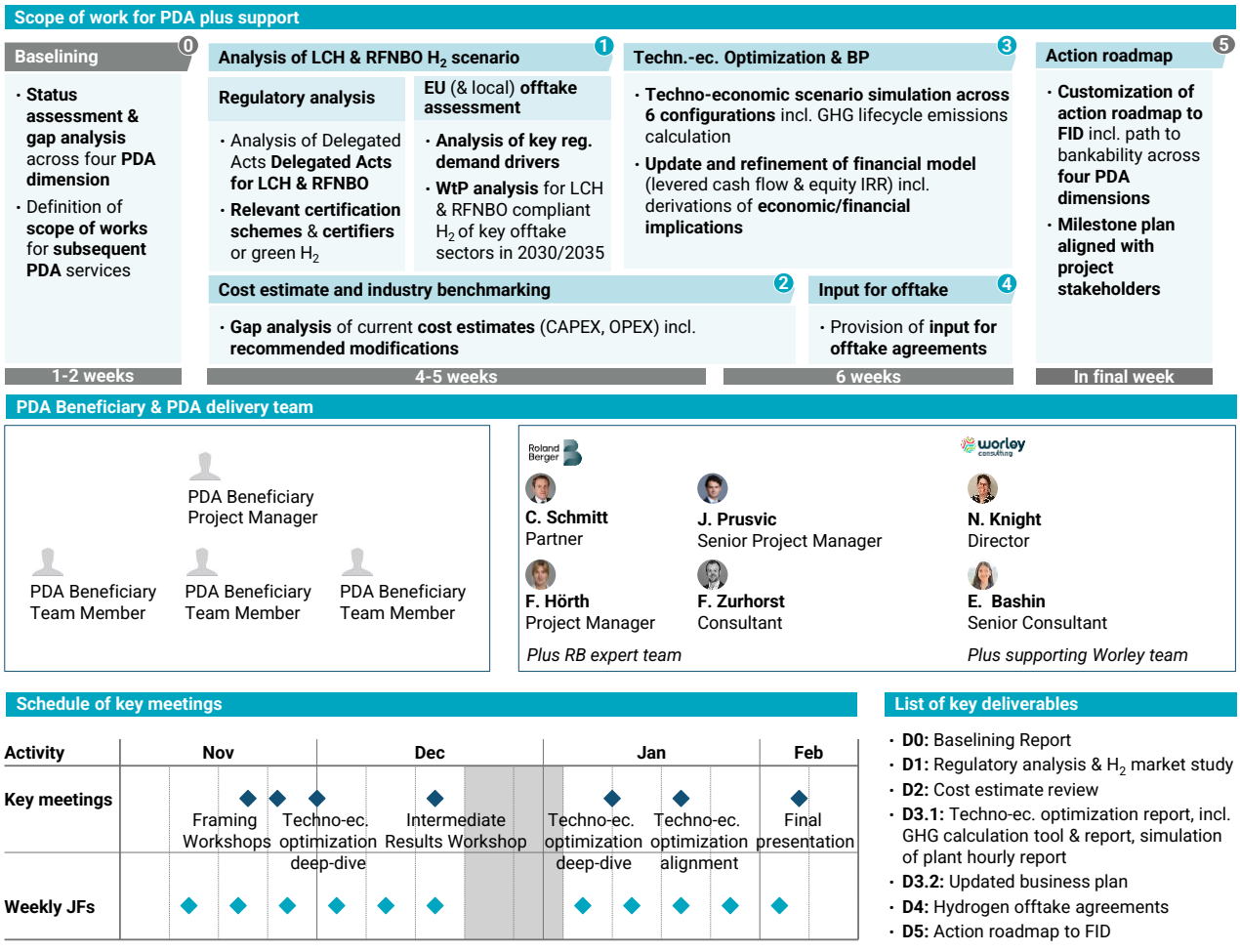
On a weekly basis, Jour-Fixes took place to align on the progress report and any clarification needs.

At the end of the PDA plus support and as part of the final presentation, all deliverables were handed over to and discussed with the PDA Beneficiary team.

The key PDA plus deliverables per PDA plus Beneficiary included:

- A c. 20-page Baselining Report
- Four to five c. 25-80-page deliverables depending on the specific scope of work
- A c. 3-4-page action roadmap to FID

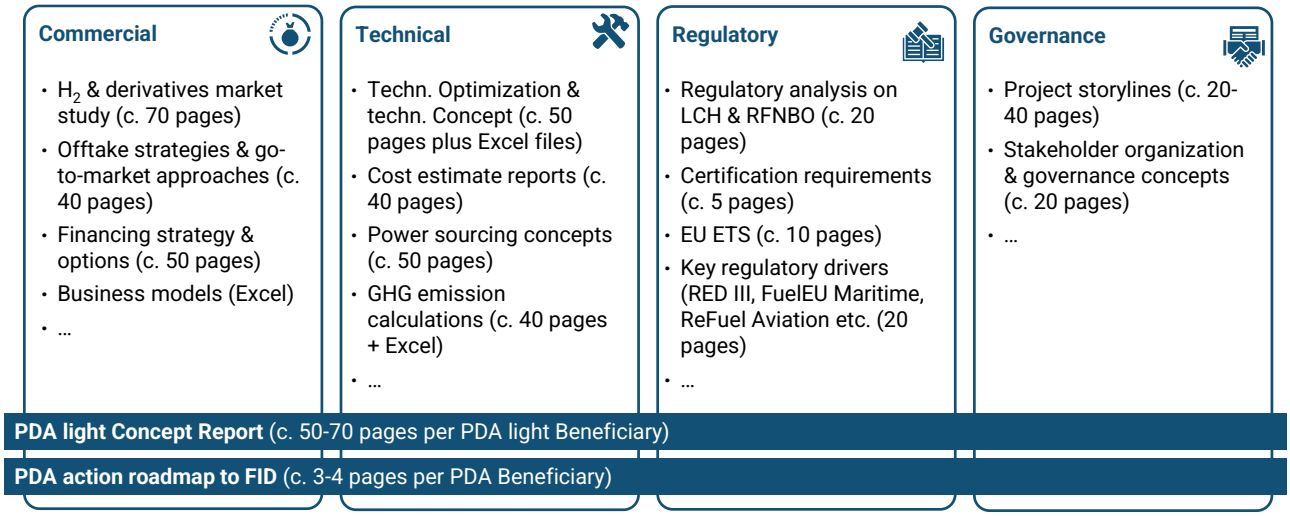
FIGURE 21: **PDA PLUS DELIVERY (EXAMPLE)**



The figure below provides an overview of the key PDA deliverables for the first wave of PDA Beneficiaries. In total, c. 50 deliverables within the PDA plus programme were created for six PDA plus Beneficiaries, this corresponds to c. 8-10 deliverables per PDA Beneficiary. Within the PDA light programme, c. 35

deliverables for the 9 PDA light Beneficiaries were created, i.e., c. 3-4 deliverables per PDA light Beneficiary.

FIGURE 22: KEY DELIVERABLES OF THE FIRST PDA COHORT



4

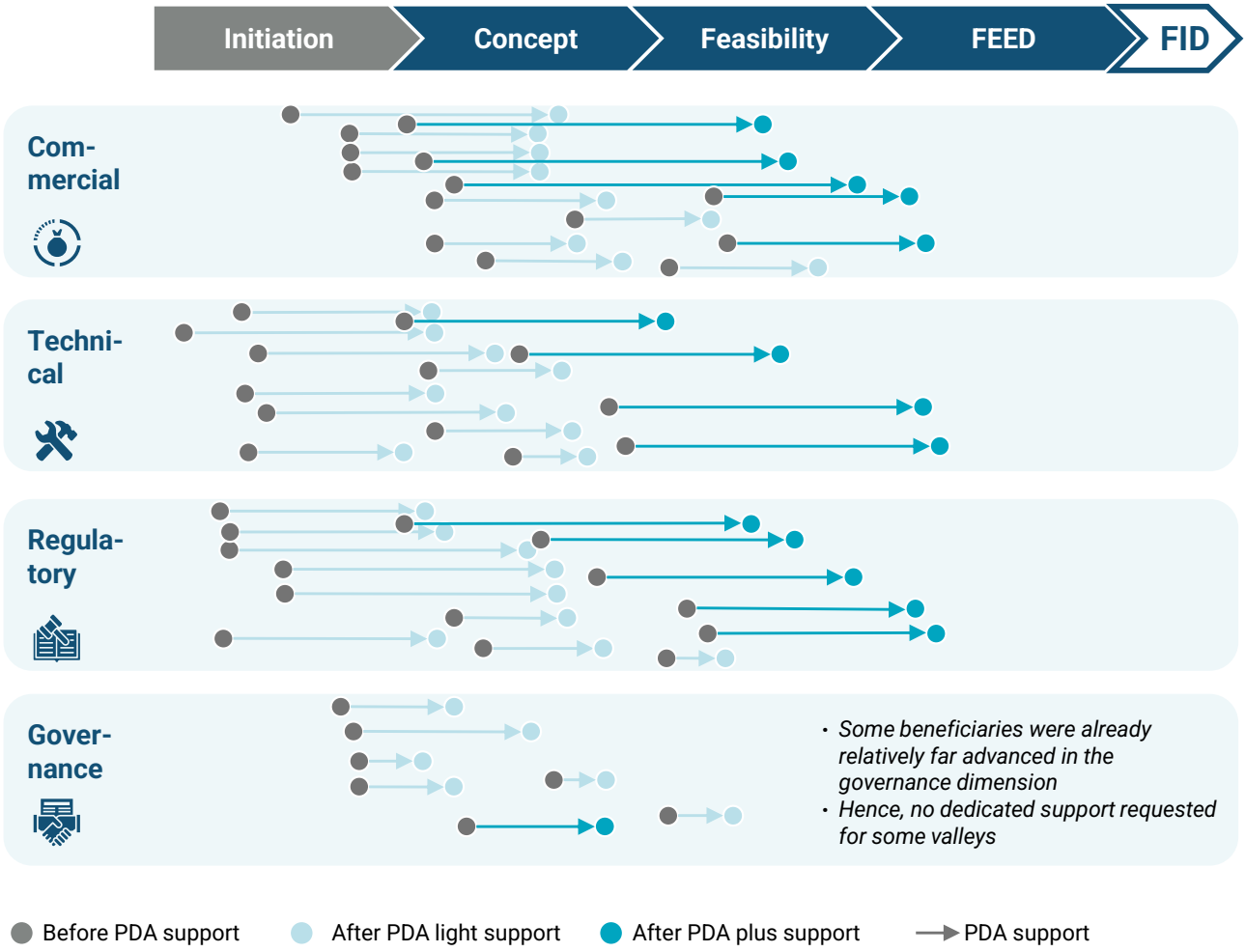
Outcomes and impact of the first Project Development Assistance wave

4 Outcomes and impact of the first Project Development Assistance programme wave

The overarching objective of the PDA programme is to contribute to advancing Hydrogen Valleys towards the FID. PDA light projects are to be advanced from an early idea stage (initiation stage) to a compelling pre-feasibility project concept (concept stage), while the concept-stage PDA plus projects should achieve feasibility.

The figure below illustrates the progress of the individual PDA Beneficiaries along the project development pathway – from initiation through concept and feasibility to FEED and FID – that the Hydrogen Valleys of the PDA Beneficiaries have achieved during the PDA support.

FIGURE 23: **STATUS OF HYDROGEN VALLEYS BEFORE AND AFTER PDA SUPPORT**



Key commercial results and impact

As the PDA support was for most Valleys heavily focused on the commercial dimension, PDA Beneficiaries could achieve most progress in the commercial dimension.

The initial maturity of PDA light Beneficiaries within this dimension varied considerably across Hydrogen Valleys and ranged from early-stage initiation to even advanced concept stage. Although PDA plus Beneficiaries were more homogeneous in this aspect, they also showed significant differences in terms of commercial sub-dimension maturity. This referred to status of the power sourcing concept, commercial structuring, business planning and offtake with most of the PDA plus Beneficiaries at the early concept stage,

while some even surpassed the concept stage at the beginning to the PDA support.

Key **commercial impacts** of the **PDA light support** included:

- Commercial foundation significantly strengthened in several project through rigorous validation of willingness-to-pay and LCoH , providing a credible and data-driven basis for investor engagement and offtake discussions
- Commercial pipeline visibility significantly enhanced and path to securing offtake structured via systematic identification and prioritisation of 30+ offtakers, combined with the mapping of viable local and export routes to EU markets
- Negotiations with airlines enabled through commercial detailing, targeted business development support and structuring of commercial concept
- Business cases improved via the identification of additional monetisation and top-line potential, in particular through the valorisation of CO_2 savings beyond established threshold and supplementary revenue streams that had not previously been reflected in the commercial models
- Project investment rate of return (IRR) improved via rigorous business case analysis, combined with a structured financial assessment, thereby significantly strengthening the investment proposition and improving the project's attractiveness for prospective financiers

Key **commercial impacts** of the **PDA plus support** included:

- Solid foundation for the next phase of capital raising created based on the development of robust business plans and professionally structured investor pitch decks, thereby enabling projects to initiate concrete discussions with strategic investors and development finance institutions, and to establish institutional contacts that open up new financing pathways
- Materially improved financial metrics achieved via rigorous business plan optimisation, refinement of assumptions and commercial structuring, yielding a net present value of c. EUR 20 m and a project IRR of 15%, significantly enhancing the bankability and investor appeal of the underlying project
- Pipeline of 10+ qualified offtake leads generated due to structured market outreach and targeted commercial development efforts, with active negotiations already under way, demonstrating that focused commercial support can rapidly convert latent market interest into concrete, deal-stage engagement
- Cost understanding from high-level indicative basis to more granular and reliable assessment advanced via detailed CAPEX and OPEX analysis on an item basis, providing a significantly stronger commercial foundation for investor discussions, offtake pricing negotiations and overall business case substantiation

Key technical results and impact

In the technical dimension, most supported PDA light Hydrogen Valleys were at the beginning of their technical detailing with first and high-level configurations defined and initial techno-economic validation in place. Some PDA light Beneficiaries additionally had a more refined technical study in place, detailing technical aspects of asset configurations, CAPEX and OPEX estimates and even the power sourcing concept.

As the technical concept study (Front-end Loading 1) was one of the pre-requisites to participate in the PDA plus programme, PDA plus Hydrogen Valleys had a technical concept incl. a Class V cost estimate on CAPEX and OPEX in place with the support being more tailored to further refining selected aspects of the technical concept.

The Hydrogen Valleys that benefitted from technical PDA support could be advance from early initiation to at least concept (PDA light) and in the technical dimensions supported from concept to feasibility and even beyond (PDA plus).

Key **technical impacts** of the **PDA light support** included:

- Coherence of hydrogen ecosystem substantially improved via structured asset development, enabling a more robust and integrated approach to hydrogen production, storage and distribution infrastructure
- Further LCoH optimisation potential of up to 10% unlocked via detailed asset sizing exercises, demonstrating that targeted techno-economic refinements can yield material cost improvements
- Substantiated risk register of more than 35 risks developed, incl. technical detailing of risk mitigation measures
- Technical concept via rigorous asset cost optimisation refined, yielding in a meaningful reduction of projected capital expenditure, directly

improving the overall cost efficiency and competitiveness of the technical concept

Key **technical impacts** of the **PDA plus support** included:

- Cost estimation methodology systematically advanced, progressing from a Class IV (intermediate concept or feasibility-stage cost estimate) to a Class III cost estimate (preliminary budget authorisation cost estimate) , thereby substantially improving the reliability and granularity of project cost assumptions and the technical foundation for engineering and contractor engagement decisions
- LCoH optimisation potential of up to 25% identified via detailed techno-economic analysis and mapping of technical improvement levers across more than 10 distinct areas, providing the basis for the refinement of the technical concept towards a more cost-efficient and technical optimised design
- Electrolyser procurement and supplier selection enabled via a systematic evaluation and selection methodology, leveraging expertise on technology risk reduction and assumptions on concrete, market-validated procurement pathways

Key regulatory results and impact

Regulatory support was for most Hydrogen Valleys a cross-cutting support dimension, enabling both commercial and technical concept improvement as well as enhanced understanding of the relevant legislation and its implications for PDA light and PDA plus Beneficiaries.

Key **regulatory impacts** of the **PDA light support** included:

- Decision-making base established regarding whether the intended production set-up would likely qualify under the applicable frameworks as RFNBO-compliant or low-carbon hydrogen
- Understanding of sectoral implications of the current status of implementation of the RED III enabled, allowing project developers to contextualise their projects within the EU policy agenda and to use this framing in early-stage conversations with public authorities and potential partners
- Awareness regarding the existence and general requirements of hydrogen certification systems and Guarantees of Origin created, enabling the development of a more granular certification approach for their products

Key **regulatory impacts** of the **PDA plus support** included:

- Project-specific conclusions on regulatory eligibility of RFNBO-H_2 vs. LCH enabled, allowing PDA Beneficiaries to make informed and targeted adjustments to their technical design and operational parameters and to engage in discussions with certifying bodies, offtakers and financiers with an up-to-date, evidence-based perspective
- Via detailed analysis of RED III, FuelEU Maritime and ReFuel Aviation Regulation, actionable insights into how sectoral quotas and national renewable energy targets create concrete demand pull for specific hydrogen products unlocked, thereby directly strengthening the commercial narrative used in offtake negotiations and discussions with public authorities, repositioning projects as active contributors to binding policy goals

Key governance results and impact

In particular PDA light Beneficiaries aiming to develop large-scale Hydrogen Valleys requested Valley governance support.

Having as a starting point in most cases a broad, initial understanding of how the governance structure and the organisation of the different Hydrogen Valley projects could look like, the PDA support could contribute to the structuring of complex project set-ups and provide guidance on the governance and organisation of the Valley.

Key **impacts** related to the **governance aspects** of the **PDA light support** included:

- Highly complex, multi-component Valley setup encompassing more than 20 interdependent sub-projects successfully restructured via a series of three dedicated stakeholder workshops with participants from 20 distinct projects, thereby enabling the identification of meaningful cross-project synergies and establishing a foundation for coordinated, aligned implementation
- Hydrogen Valley rescoping concept embedded via the conceptualisation of a three-stage phasing model and a clear organisational framework for sequencing activities, enabling informed and transparent governance processes and prioritisation of the most promising projects within the Hydrogen Valley
- Via a comprehensive project review, senior leadership and C-level support and commitment

secured, thereby ensuring strategic alignment across governance bodies and executive buy-in as a critical precondition for mobilising internal resources and sustaining project momentum through complex, multi-year development phases

- Valley ecosystem governance model conceptualised and set up via the clarification of roles, alignment of objectives, thereby strengthening coordination between partners and enabling a more effective Valley governance structure

PDA plus Beneficiaries did not explicitly benefit from the governance support as they were already comparably advanced in this dimension or did not request specific governance support.

5

Findings and lessons learned from the first Project Development Assistance wave

5 Findings and lessons learned from the first Project Development Assistance wave

5.1 Key insights into the hydrogen market state of play in Europe

The PDA support provided deep, up-to-date insights into how the hydrogen market in Europe is evolving and where the real bottlenecks and opportunities are. By working closely with Hydrogen Valley projects, the PDA support revealed the conditions under which viable offtake can be secured, which regulatory frameworks most effectively unlock demand, how business cases can be strengthened and diversified, and which funding mechanism can decisively move projects towards investment readiness.

This section distils four pivotal market insights that collectively illustrate the current dynamics, challenges and levers for acceleration in the emerging hydrogen sector.

Offtake is challenging but possible

Securing offtake remains one of the most critical hurdles for hydrogen projects, as investors and financiers require long-term demand visibility before committing capital. Well-structured offtake agreements therefore act as the central lever for creating a stable business case and unlocking financing.

Hydrogen Valleys that build on strong industrial anchor projects – such as refineries or other large energy-intensive sites – are being particularly well positioned to conclude such contracts and signal credibility to the market.

Regulation is a core enabler to drive hydrogen demand

Clear, predictable and binding hydrogen-specific regulation is a key driver of demand, as it provides the certainty needed for end users to switch from conventional fuels and for developers to take FID.

While delays in implementing RED III still create a degree of uncertainty, emerging LCH regulation is already opening up new business cases and demonstrating how targeted regulatory frameworks can catalyse investment and market uptake.

Strengthening of business cases is the key priority

For many projects, the LCoH remains above what most hydrogen offtakers are willing to pay, making cost reduction through techno-economic optimisation an imperative.

At the same time, developers increasingly recognise the need to broaden their revenue base by tapping into additional value pools – for example, grid and system services – to enhance resilience of their business cases and improve overall project bankability.

DEVEX funding can unlock projects

Current financing instruments predominantly focus on CAPEX, leaving a structural funding gap for DEVEX that are necessary to mature projects to an investable stage.

Targeted PDA-type support is proving to be an effective mechanism to close this gap, enabling project promoters to advance through the development phase, de-risk their concepts and ultimately reach the point where traditional project finance solutions can be mobilised.

5.2 Lessons learned and feedback regarding the first Project Development Assistance programme[1]

The first PDA cohort has demonstrated strong market interest and clear added value of the support instrument as it addresses the genuine market needs and generates tangible value for Hydrogen Valley developers. At the same time, it revealed targeted opportunities that led to the refinement of both the application and delivery process for the upcoming PDA cohorts.

[1] The content of this section is a high-level summary of the modifications that were made. Authoritative and binding are the published Call documents to the second Call for Applications for PDA support.

Lessons learned from the PDA application process

With a view on the **timing of the application phase**, experience from the first Call for Application showed that a concise, time-boxed call format is effective in mobilising interest – the number of submissions rose sharply towards the deadline – but that running the call over the summer months resulted to be not the ideal point in time, as many organisations seemed to be resource-constraint in terms of staffing and internal decision-making during this period.

Future Calls for Application for PDA support are planned in a way to avoid peak summer vacation periods. The second Call for Applications has therefore opened in April 2026 with a submission deadline end of June 2026. This ensures that high-quality projects have sufficient time to coordinate partners, gather data and prepare robust submission. The length of the application period of c. 10 weeks will be kept in the spirit of maintaining a pragmatic, time-boxed process.

Communication with applicants has generally worked well, not least because word of mouth within the hydrogen community has proven to be a powerful multiplier and because access to commercial and funding-related support is a strong motivation to apply.

The application feedback survey indicated that the average effort required to compile the necessary information was roughly 40 hours which occasionally led to last-minute stress and internal bottlenecks.

To manage expectations and to indicate the actual effort, this information of the expected workload was included in the Call documents of the second Call for Applications.

To further increase traction, the one-to-one outreach will be continued. The application feedback survey revealed that support in commercial dimensions and in particular funding was the primary motivation for a PDA application. The communication around the second Call for Application was therefore tailored in a way to more explicitly describe the exact scope of the commercial support dimensions together with results presented from previous PDA Beneficiaries.

PDA applicants further indicated several minor clarification needs in the existing **Call for Application documents**. In particular, the level of detail expected for CAPEX and OPEX information was for some applicants not sufficiently clear. Moreover, the practical differences between the PDA light and PDA plus tracks seemed for some PDA applicants not clearly pointed out, which made it difficult for some applicants to choose the most appropriate support option and to tailor their proposals accordingly.

In response, the Call for Application documents were refined: Guidance on CAPEX and OPEX requirements was sharpened and expanded, specifying the granularity, underlying assumptions and supporting evidence expected from applicants. The programme specifics, objectives and scope of support of the PDA light and PDA plus programme tracks described in a more differentiated manner, enabling applicants to clearly understand the respective scope and depth of support expectations. Finally, specific consent and related provisions were updated.

The experience from the first PDA cohort has shown that **participation from EU 13 countries** was very limited, indicating that projects in these markets face specific barriers to accessing the PDA programme. This under-representation suggests both an untapped application potential and a need for more targeted support formats.

To address this, a dedicated PDA light track was introduced in the second Call for Applications that is explicitly tailored to the needs and capacities of EU 13 applicants. This tailored track is intended to lower the entry threshold, better reflect typical project maturity levels and resource constraints in these countries, and thereby foster a more balanced geographical distribution of supported Hydrogen Valleys across the EU.

Lessons learned from the PDA delivery

In terms of **timing and scoping,** the defined, time-boxed delivery periods of six weeks (PDA light) and twelve weeks (PDA plus) was ambitious but overall manageable for both project developers and PDA Service Consultants. However, it also became evident that the scoping phase, during which the specific focus, work packages and milestones are agreed, required more time and interaction than originally foreseen, as most PDA Beneficiaries used this stage to sharpen their strategic priorities and align with internal stakeholders. At the same time, once the alignment was achieved, it proved highly effective in steering the subsequent work and in ensuring that the support delivered was closely tailored to the most critical project needs.

To take into account the need for a more extended scoping phase, the delivery approach will be adjusted without abandoning the disciplined time-boxed model: The scoping phase will be separated clearly from the main delivery period and slightly extended. After the notification of PDA applicants, a dedicated two-to three-week scoping phase will take place in July 2025 before the actual PDA delivery period of six (PDA light) and twelve (PDA plus) weeks will commence in September 2026. This approach is aimed to reduce the

risk of downstream delays and re-work once the PDA delivery is underway. In addition, the expected time commitment during the PDA scoping phase and during the PDA delivery period on the side of the PDA Beneficiaries will be communicated more explicitly from the outset, so that they can plan internal resources accordingly and engage consistently throughout the PDA process.

Another learning was that the **consortium set-up** of a given Hydrogen Valley can significantly influence the efficiency of PDA delivery. In several cases, umbrella organisations or coordinating local or regional authorities acted as the formal applicants and primary contact point, but were not directly responsible for project implementation. In this constellation, the first task for the coordinating organisations was to identify the project developers within the Hydrogen Valley that actually required PDA support, thereby leading to some protractions in the PDA delivery process.

To address this, a dedicated option for coordinating authorities and organisations to apply for PDA support was introduced in the second Call for Applications: PDA applicants that act as coordinating authorities or organisations now have the possibility to align upfront with the project developers within the Hydrogen Valley they coordinate on the exact scope of PDA support each project developer requests. Project developers within this Hydrogen Valley that request PDA support now need to co-sign the PDA application form and indicate their contact details and desired PDA support. This approach will ensure streamlined communication, faster decision-making and supports shared ownership of the project across the consortium.

The PDA delivery showed that the **support needs** of PDA light Beneficiaries are more heterogeneous than initially anticipated. The support for several Hydrogen Valleys that were awarded with a PDA light was as a result of the baselining and scoping phase more modular and referred mostly on commercial and technical topics rather than the project concept report as foreseen within the PDA light.

Therefore, the PDA light support will be adapted in a way that as part of the scoping phase, two to three focus topics across all four PDA dimensions will be identified together with the PDA Beneficiary. This approach allows for greater flexibility in terms of content while ensuring that the assistance provided with the PDA is more closely tailored to the specific situation and maturity level of each Hydrogen Valley while remaining within the overall PDA light framework.

Feedback survey results from PDA Beneficiaries

The feedback collected from the PDA beneficiaries on the PDA support reveals an overwhelmingly positive assessment of the PDA programme across all measured dimensions.

The surveyed PDA Beneficiaries indicated a very high likelihood to recommend the PDA programme to others, underscoring a high level of confidence in the value and relevance of the programme. Equally, they rated the overall quality and satisfaction with the support with a nine out of ten, and the same proportion expressed very high satisfaction with the main PDA Service Consultant Roland Berger, — a near-unanimous endorsement that is particularly noteworthy given the complexity and diversity of the projects involved.

In terms of time investment, the data indicates that PDA Beneficiaries dedicated on average approximately 18 hours during the baselining phase and around 10 hours during the concept phase, reflecting a meaningful but manageable level of engagement that underlines the active and committed participation of PDA Beneficiary project teams throughout the PDA process.

FIGURE 24: **PDA BENEFICIARY FEEDBACK SURVEY RESULTS**

Recommendation of PDA support

9/10
Average likelihood of recommendation of PDA support

Satisfaction with PDA support

9/10
Average PDA Beneficiary satisfaction with PDA support and results

Collaboration with Roland Berger and Worley

9/10
Average satisfaction with collaboration and quality of work of lead PDA Service consultants Roland Berger and Worley

Time investment for PDA support

~18 hours per week spent in the baselining phase
~10 hours per week spent in the core PDA delivery phase

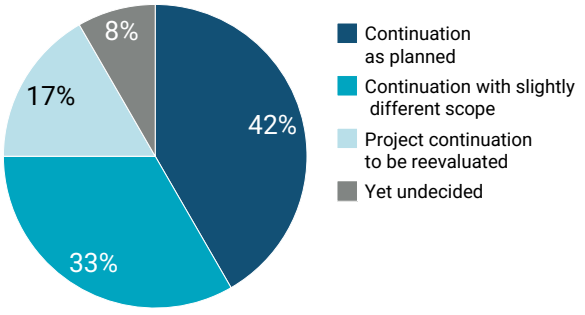
Being asked about how the PDA support influenced their Hydrogen Valley project realization, 42% of the PDA Beneficiaries indicated that they continue the project as planned, a third will continue with a slightly different scope, 17% will reevaluate the project's continuation and 8% is yet undecided. Given the current state of the hydrogen market, the PDA programme could contribute to further mature Valleys along their planned path, and where necessary recalibrate them towards the current market conditions, thereby increasing the likelihood of realization. This demonstrates the PDA programme's ability to sustain and catalyse the Valleys' momentum in a challenging market environment.

In terms of strategic priorities for the next months, PDA Beneficiaries unanimously see commercial topics among their most prominent near-term priorities. While PDA light Beneficiaries place a heavy emphasis on refining their business model and securing offtake, a top priority for PDA plus Beneficiaries is funding and financing.

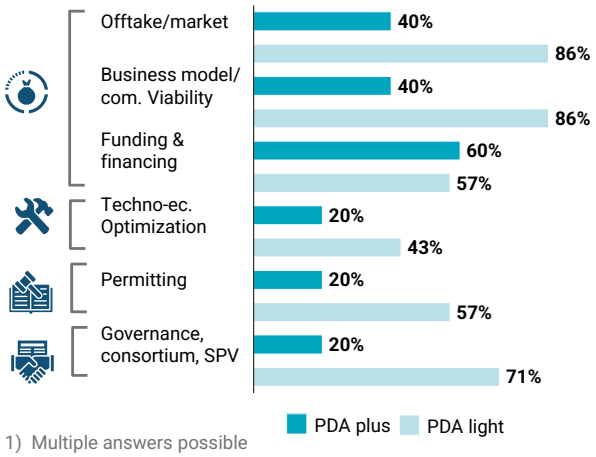
This pattern suggests that, whilst technical and regulatory groundwork has been meaningfully advanced through PDA support, the subsequent focus of project development is clearly oriented towards achieving commercial viability and organisational consolidation, the latter particularly prioritised by PDA light Beneficiaries.

FIGURE 25: **PROJECT REALISATION OUTLOOK AND KEY IMMEDIATE PRIORITIES**

Outlook on project realization



Key priorities for next 6 months[1]



1) Multiple answers possible

6

Outlook and next steps

6 Outlook and next steps

In 2026, the Hydrogen Valleys Facility will enter in its next phase as it further builds out its targeted set of activities designed to further accelerate the development of Hydrogen Valley projects across Europe towards FID.

By focusing on high-impact activities, the Hydrogen Valleys Facility aims to accelerate the clean hydrogen transition in Europe by advancing a diverse portfolio of Hydrogen Valleys to investment-readiness, transforming regional initiatives into continental success and driving innovation via dissemination of knowledge.

Within its three pillars, the Project Development Assistance programme, the Hydrogen Knowledge Portal and capacity building activities and the H2V Platform, various activities and milestones are planned.

FIGURE 26: OUTLOOK ON THE HYDROGEN FACILITY ACTIVITIES FOR 2026

Pillar 1: Project Development Assistance programme[2]

In April 2026, the Clean Hydrogen Partnership launched its second Call for Applications. This Call will offer a new group of up to 13 Hydrogen Valleys across the EU and in countries associated to Horizon Europe the opportunity to benefit from structured expert support and to advance their projects towards bankability.

In August 2026, the Clean Hydrogen Partnership will conduct for the Hydrogen Valley projects that received PDA support within this cohort its first bi-annual milestone tracking to follow up with the progress achieved after the PDA support. This review will provide an evidence-based view on how the PDA support has contributed to the project advancement and where additional action may be required.

In September 2026, the second PDA cohort is scheduled to commence, marking the start of a new cycle of tailored Hydrogen Valley project support. This will allow the Hydrogen Valleys Facility to build on the lessons learned from the first PDA cohort and to further scale its impact across a broader set of regions and project constellations.

Pillar 2: H2V Knowledge Portal and capacity building

Throughout 2026, the H2V Knowledge Centre will further be built out with additional knowledge material on hydrogen project development to continue to serve as a self-service platform for learning and exchange, aimed at strengthening the capabilities of Hydrogen Valley stakeholders. The Hydrogen Valleys Facility provides a growing set of self-service knowledge materials on all core aspects of Hydrogen Valley development. These resources will enable project promoters, public authorities and other stakeholders to access guidance, tools and best practices at their own

[2] The content of this section is a high-level summary of the modifications that were made. Authoritative and binding are the published Call documents to the second Call for Applications for PDA support.

pace, thereby supporting continuous capacity building beyond the formal PDA engagements.

In parallel, a rolling webinar series starting in July 2026 will cover key hydrogen project development topics, featuring expert talks and discussions with policymakers and industry stakeholders. Furthermore, for Hydrogen Valleys that receive funding by the Clean Hydrogen Partnership and that have participated in PDA support, in-person interactive workshops will take place. These workshops intend to create a vivid Hydrogen Valley community, foster the sharing of best practices and knowledge and initiate collective action on topics of common interest.

Pillar 3: H2V Platform

In 2026, the H2V Platform will be further positioned as the central information hub for Hydrogen Valleys.

In April 2026, a comprehensive data update was successfully completed, drawing on a fully redesigned and restructured questionnaire to capture project information in a more consistent, comparable and user-friendly manner with more than 100 Hydrogen Valleys requested to indicate their project fundamentals and information on their recent status.

On this basis, the H2V Platform was relaunched and is now live with an expanded set of statistics, enhanced functionalities and significantly improved visualisations. This upgrade is intended to provide stakeholders with deeper and up-to-date insights into the Hydrogen Valley landscape, facilitate benchmarking and monitoring, and support evidence-based decision-making at project and policy level.

Annexes

Annex I: Hydrogen Valley profiles of the PDA Beneficiaries

This Annex provides an overview of the 15 PDA Beneficiaries as well as their corresponding Hydrogen Valley projects.

The characterisation entails a description of the Hydrogen Valley project including its envisaged hydrogen and derivatives output, the planned electrolyser size, as well as the other assets that are being developed along the hydrogen value chain – either by the PDA Beneficiary lead developer directly or by other Hydrogen Valley members and third parties. The produced hydrogen and derivatives products are mapped to the planned hydrogen end uses within industry, mobility and energy. The Valley description concludes with the most important milestones such as FID and COD and the current status of development.

Per PDA Beneficiary, the key areas of support received as per scope of work are summarised and the next steps in the Hydrogen Valley development outlined thereafter.

The Hydrogen Valley projects were developed within their respective phase (PDA lights in initiation, PDA plus projects in concept phase) towards the next phase. The figure below illustrates a typical roadmap to FID and highlights the most relevant activities per phase.

FIGURE 27: **TYPICAL ROADMAP FOR HYDROGEN VALLEY PROJECTS TOWARDS FID**

Hydrogen Valley profiles of the PDA light Beneficiaries

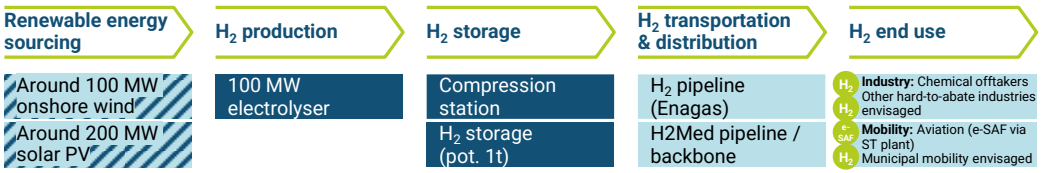
In this chapter, the Hydrogen Valley profiles of the following 9 PDA light Beneficiaries are presented:

Name of Hydrogen Valley	Lead developer	Developer category	Country	Main region
Hydrogen Valley Zamora	Enertrag	Independent project developer	Spain	Leon province
HyCoast	Energy Transition Norway	Consortium organisation	Norway	Region around Bergen
RHYNE-UP	e-mobil BW GmbH	State-owned agency	Germany	Cross-border (Germany, France, Switzerland)
HydrogER	Hera SpA	Energy & utility company	Italy	Emilia Romagna
Galileu Green Hydrogen Valley	Smartenergy Portugal	Independent project developer	Portugal	Lisbon region
TAJUÑA H2	RIC Energy	Independent project developer	Spain	Madrid region
Coast 2 Coast	East Midlands Pipeline Ltd	Independent project developer	UK	East Midlands
HyNA Hydrogen Valley	Région Nouvelle-Aquitaine	Regional authority	France	Nouvelle-Aquitaine Region
HyHOPE	Wien Energie GmbH, Hydroeconomy	Energy & utility company	Austria	Cross-border (Austria, Hungary, Slovakia)

Hydrogen Valley Zamora – Spain, Leon province (Enertrag)

Zamora in a nutshell

- **Description**: The Spanish Hydrogen Valley Zamora is organised around a 100 MW electrolyser powered by solar PV and onshore wind. The project combines energy supply (onshore wind, solar PV, grid connection and grid injection), hydrogen production, storage and transport. The H_2 is planned to be injected into the H2Med pipeline (COD 2030) and used locally (industrial park), or to be converted to e-SAF via a Fischer-Tropsch process for aviation
- **Lead developer:** ENERTRAG TRANSICIÓN ENERGÉTICA (Independent developer)
- **Electrolyser size [MW]:** 100 MW electrolyser
- **H_2 & derivatives output:** 9 ktpa H_2, 27.5 ktpa e-SAF
- **Timeline:** Feasibility in 2027, FID in 2028, start of construction in 2029, COD in 2031
- **Status:** Mostly concept stage



Covered directly by lead developer Covered by other members of the Hydrogen Valley/third parties

Hydrogen Methanol Ammonia e-SAF e-Naphta

Key areas of PDA support

Commercial
- Willingness-to-pay analysis for Spain with focus on industry, mobility, energy sectors
- Indicative volume assessment per sector

Technical
- Validation of Zamora's LCoH model by running it in OptiPTX and benchmarking inputs against proprietary data base

Regulatory
- Regulatory status quo analysis on European/ national level

Valley govern.
- n/a

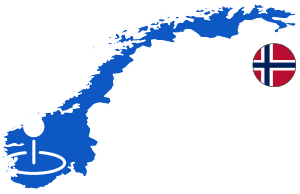
Planned next steps in the Hydrogen Valley development

- Revision of power souring strategy
- Set-up of vendor strategy for electrolysis technology
- Investigation of potential offtakers and capable offtake sectors

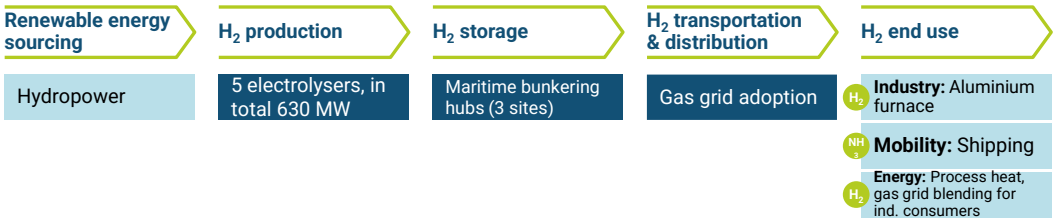
HyCoast – Norway, Region around Bergen (Energy Transition Norway)

HyCoast in a nutshell

- **Description**: Fully integrated hydrogen ecosystem, connecting large-scale renewable hydrogen production with a cumulated 630 MW electrolysis. In addition to the H_2 production, the Hydrogen Valley also includes storage, transport and maritime bunkering hubs at 3 sites, with industry (aluminium furnace) and mobility (shipping) as key planned end uses



- **Lead developer:** Energy Transition Norway (consortium organisation)
- **Electrolyser size [MW]:** 630 MW
- **H_2 & derivatives output:** 46 ktpa H_2, 225 ktpa NH_3
- **Timeline:** Different FID and COD milestones with HYDS starts operations in 2028; Valley output surpasses 7 ktpa H_2 by 2028
- **Status:** Concept phase/feasibility stage



Key areas of PDA support

Commercial
- Local offtake analysis (Willingness-to-pay & demand)
- NH_3 capacity review at EU ports

Technical
- Hydrogen and natural gas mixing concept for one Hydrogen Valley project

Regulatory
- Review local regulation on offshore vessels

Valley govern.
- n/a

Planned next steps in the Hydrogen Valley development

- Consolidation of industry commitment and optimization of consortium size
- Focus on building domestic success stories first, while having a long-term international vision
- Pursuit of funding opportunities in a short- to mid-term timeframe

RHYNE-UP – Germany, cross-border region with France and Switzerland (e-mobil BW)

RHYNE-UP in a nutshell

- **Description**: Development of a cross-border Hydrogen Valley along the upper Rhine river, connecting Germany, France and Switzerland, with links to Austria and Liechtenstein. It comprises c. 159 MW of electrolyser capacity, transported via pipelines, trucks and trailers for industrial, mobility and energy end use
- **Lead developer:** e-mobil BW (Agency owned by a German regional authority (Federal state of Baden-Württemberg))
- **Electrolyser size [MW]:** Starting with 66 MW, expanding to 159 MW based on current planning
- **H_2 & derivatives output:** 18 ktpa H_2 (current planning)
- **Timeline:** Commissioning by mid 2028 for advanced testbeds & by end of 2030 for less mature testbeds
- **Status:** Concept & feasibility stage

Renewable energy sourcing	H_2 production	H_2 storage	H_2 transportation & distribution	H_2 end use
Local RES supply	159 MW across various locations	Various storage, compression & pressure systems	Local H_2 pipelines, rail, truck, container trailers	**Industry:** Refining, Chemicals
			HRS (mobility & ships)	**Mobility:** Shipping, Road
				Energy: Power generation, Process heat

Covered directly by lead developer Covered by other members of the Hydrogen Valley/third parties

Hydrogen Methanol Ammonia e-SAF e-Naphta

Key areas of PDA support

Commercial
- Regional offtake analysis (Willingness-to-pay & demand)
- H_2 imports

Technical
- n/a

Regulatory
- Subsidy screening (EU, national, state level)

Valley govern.
- Definition of Hydrogen Valley phasing model

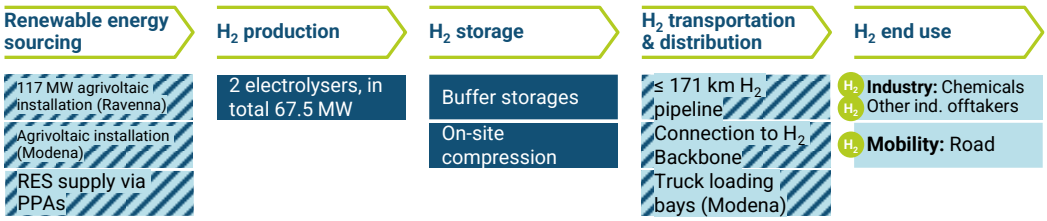
Planned next steps in the Hydrogen Valley development

- Regular contact with the different sub-projects of the Valley to stay updated on the status of implementation
- Exchange of best-practices with other Hydrogen Valleys in Europe
- Infrastructure development through public funding (e.g., BW State funding) and private investment
- Monitoring of funding opportunities for the further development of the Hydrogen Valley

HydrogER – Italy, Emilia Romagna Region (Hera SpA)

HydrogER in a nutshell

- **Description**: HydrogER is a regional Hydrogen Valley project in the region Emilia-Romagna with two electrolyzers, up to 130 km of regional H_2 pipeline and access to the European Backbone with industrial (chemicals, refining, metallurgy, ceramics) and mobility (public transport, port logistics)
- **Lead developer:** Hera SpA (Energy/utility company)
- **Electrolyser size [MW]:** 67.5 MW
- **H_2 & derivatives output:** 9 ktpa H_2
- **Timeline:** FID by mid 2027 (Modena) end 2027 (Ravenna) and early 2029 (Pipeline), COD by end 2028 (Modena), end 2029 (Ravenna) and end 2030 (Pipeline)
- **Status:** Concept stage



Covered directly by lead developer Covered by other members of the Hydrogen Valley/third parties

Hydrogen Methanol Ammonia e-SAF e-Naphta

Key areas of PDA support

Commercial	• Commercial offtake validation and WtP analysis • Drafting of a risk and opportunity register
Technical	• n/a
Regulatory	• Conducting a subsidy review and analysing the permitting strategy
Valley govern.	• Detailing of the project Gantt Chart and analysis of the critical path

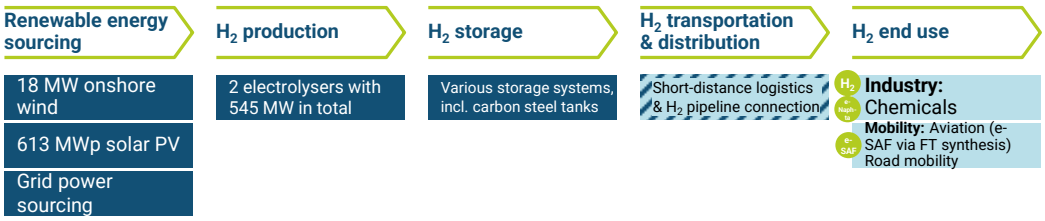
Planned next steps in the Hydrogen Valley development

- Securing of binding offtake agreements before FID
- Advancement of permitting and funding readiness

Galileu Green Hydrogen Valley – Portugal, Lisbon region (Smartenergy Portugal)

Galileu in a nutshell

- **Description**: The Portuguese Hydrogen Valley Galileu spans the value chain from H_2 production with a 545 MW electrolyzer capacity, supplied with renewable energy, storage & transport (H_2 storage, carbon steel tanks). The produced green H_2 will be transported via short-distance pipelines to nearby industry and converted to e-SAF via a Fischer-Tropsch plant for aviation end use
- **Lead developer:** Smartenergy Portugal (Independent developer)
- **Electrolyser size [MW]:** 545 MW (280 MW alkaline; 265 MW PEM)
- **H_2 & derivatives output:** 80 ktpa H_2, 155 ktpa e-fuel (mainly e-SAF)
- **Timeline:** Development phase until 2027, FID in Dec 2027, start of construction in Jan 2028, COD in Dec 2030
- **Status:** Feasibility phase



Key areas of PDA support

Commercial	• Offtake term sheet guardrails • Offtake pricing methodologies • Additional revenue stream • Investor documents review
Technical	• n/a
Regulatory	• Regulatory analysis, incl. on ReFuelEU Aviation implementation status
Valley govern.	• n/a

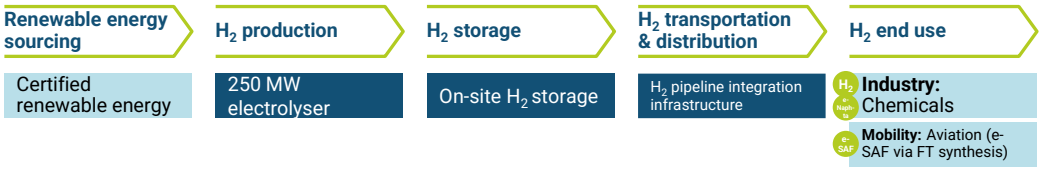
Planned next steps in the Hydrogen Valley development

- Validation of pricing formula and conversion of Letters of Interest to binding off-take
- Advancement of critical feedstock sourcing activities & address technology gaps

Tajuña – Spain, Madrid region (RIC Energy)

Tajuña in a nutshell

- **Description**: Tajuña is an integrated Hydrogen Valley close to Madrid, Spain, combining large-scale green H_2 production via a 250 MW alkaline electrolyser that will be stored onsite and transported to local offtakers. Via a RWGS and a Fischer-Tropsch synthesis, e-SAF and e-Naphta will be produced for aviation and chemical end uses
- **Lead developer:** RIC Energy (Independent developer)
- **Electrolyser size [MW]:** 250 MW
- **H_2 & derivatives output:** 39 ktpa H_2, 59 ktpa e-SAF, 11 ktpa e-Naphta
- **Timeline:** FEED until 2028, EPC 2029-2031, COD & Ramp-up 2032
- **Status:** Advanced concept stage



Covered directly by lead developer Covered by other members of the Hydrogen Valley/third parties

H_2 Hydrogen MeOH Methanol NH_3 Ammonia e-SAF e-SAF e-Naphta e-Naphta

Key areas of PDA support

Commercial
- Cement market review
- Financial model & timeline review
- Development of a commercial model of e-SAF and e-SAF sales contract structuring

Technical
- CAPEX and OPEX cost benchmarking
- Technical risk register definition

Regulatory
- Regulatory review of (non-) biogenic CO_2

Valley govern.
- n/a

Planned next steps in the Hydrogen Valley development

- Consolidation of power sourcing strategy, integration of grid connection scenarios, renewable supply options, market price dynamics, and operational flexibility needs, including input from market actors and providers
- Definition of the contract structure and pricing model: Once the strategy has been clearly established, formalization and execution of agreements with off-takers and potential strategic partners

Coast2Coast Hydrogen Valley – UK, East Midlands (East Midlands Pipeline Ltd)

Coast2Coast in a nutshell

- **Description**: Hydrogen Valley in UK that aims to generate a green fuels ecosystem around a recommissioned 63 km oil pipeline in the Midlands. With the development of 4+ hard-to-abate industry co-located nodal sites for green fuels production combining CO_2 capture for utilization as feedstock and generation of green H_2 production (TPR process), as well as to a Fischer-Tropsch for P2L based e-SAF production. The produced green fuels to be transported by a pipeline extension to East Midlands Airport with aviation as main end use
- **Lead developer:** East Midlands Pipeline Ltd (Independent developer)
- **Electrolyser size [MW]:** Up to 50 MW
- **H_2 & derivatives output:** H_2, bio-SAF or e-SAF
- **Timeline:** FID not yet scheduled, COD planned by Q4 2027
- **Status:** Mostly concept stage, Stage 1 pre-FID

Key areas of PDA support

Com-mercial
- Commercial assessment of Hydrogen Valley concept, incl. refinement of commercial structure
- Sizing of selected assets

Tech-nical
- Recommissioning pathway for EMP pipeline
- Connection node feasibility study outline

Regu-latory
- High-level UK SAF mandate assessment

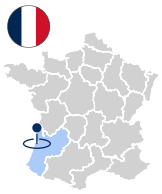
Valley govern.
- n/a

Planned next steps in the Hydrogen Valley development

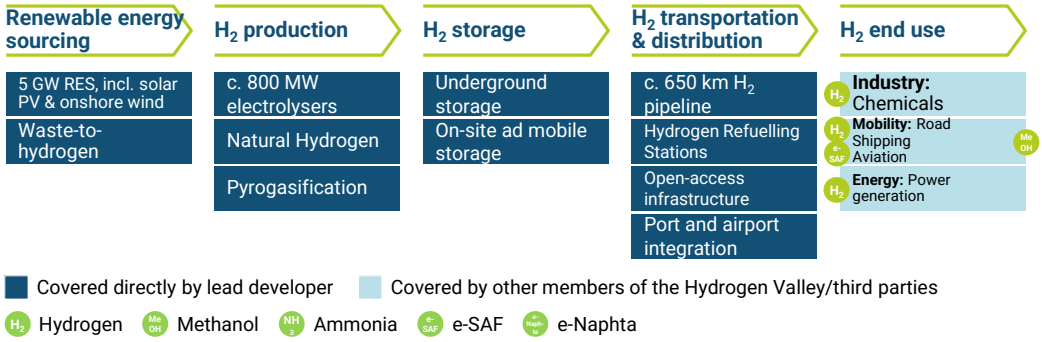
- Conclusion of commercial agreements with offtakers and suppliers
- Progress development/feasibility on co-located e-SAF demonstrator sites

HyNA Hydrogen Valley – France, Nouvelle-Aquitaine Region (Région Nouvelle-Aquitane)

HyNA in a nutshell



- **Description**: French large-scale regional Hydrogen Valley in Nouvelle-Aquitaine with 15 projects and 20 stakeholders around 226 ktpa hydrogen production, with c.140 ktpa from natural hydrogen and c.80 ktpa from electrolysis. The Hydrogen Valley covers the entire value chain from renewable energy sourcing to offtake. The large bandwidth of offtakers includes industry end users (incl. chemicals, refining), mobility (road, shipping, aviation) and energy (process heat and power generation)
- **Lead developer:** Région Nouvelle-Aquitaine (Regional authority)
- **Electrolyser size [MW]:** Up to c. 800 MW
- **H_2 & derivatives output:** 80-85 ktpa green H_2 plus c. 200-300 ktpa natural H_2, e-SAF, e-Methanol
- **Timeline:** COD from 2029
- **Status:** Mostly concept stage



Key areas of PDA support

Commercial
- Definition of a commercial phasing model
- Review of regional & national H_2 demand

Technical
- Review of key developments in the natural H_2 market

Regulatory
- Review of key regulation pushing the H_2 market
- Review of funding schemes

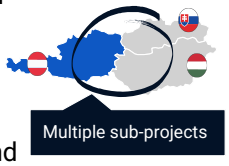
Valley govern.
- Engagement plan for Valley Governors

Planned next steps in the Hydrogen Valley development

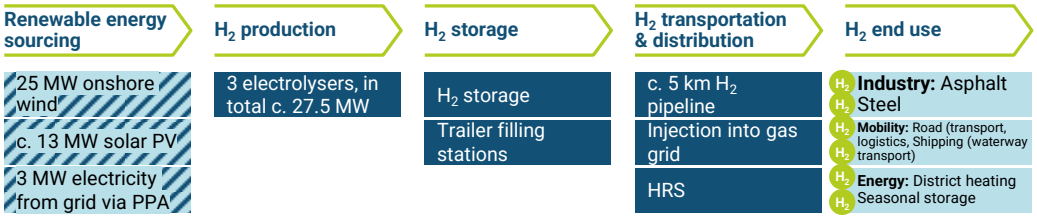
- Establishment of a strong Hydrogen Valley governance structure by the regional authority
- Search for additional funding opportunities for the HyNA Hydrogen Valley

HyHOPE – Austria, cross-border with Hungary and Slovakia (Wien Energie, Hydroeconomy)

HyHOPE in a nutshell



- **Description**: Cross-border Hydrogen Valley in Austria, Hungary, and Slovakia around c. 27.5 MW electrolyzer capacity featuring technology stack that are 25% more efficient than currently available systems and engineering designs, enabling significant CAPEX reductions. The H_2 will be transported via trucks and H_2 pipelines to industry (asphalt, steel), mobility (road, shipping) and energy offtakers (district heating, seasonal storage) in all three countries
- **Lead developer:** Wien Energie (Energy/utility company), Hydroeconomy
- **Electrolyser size [MW]:** 27.5 MW
- **H_2 & derivatives output:** 1.5 ktpa H_2
- **Timeline:** 7 different sub-projects with FIDs between Q1 2026 and Q3 2027, and CODs between Q4 2027 and Q1 2031
- **Status:** Feasibility studies for 3 sub-projects ongoing, two additional ones recently started in Q4 2025



Covered directly by lead developer | Covered by other members of the Hydrogen Valley/third parties

Hydrogen | Methanol | Ammonia | e-SAF | e-Naphta

Key areas of PDA support

Commercial
- Refinement of commercial structure of Hydrogen Valley
- Review of H_2 offtake agreements, regional investor landscape & asset sizing opp.

Technical
- n/a

Regulatory
- n/a

Valley govern.
- Review of Hydrogen Valley governance

Planned next steps in the Hydrogen Valley development

- Drafting and signature of the comprehensive offtake agreements that were already pre-negotiated
- Start of detailed feasibility study works and permitting
- Securing additional funding instruments (CEF and national funds)

Hydrogen Valley profiles of the PDA plus Beneficiaries

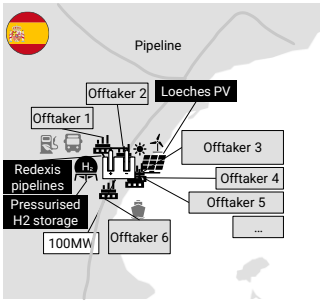
In this chapter, the Hydrogen Valley profiles of the following 6 PDA plus Beneficiaries are presented:

Name of Hydrogen Valley	Lead developer	Developer category	Country	Main region
Orange.bat	Smartenergy	Independent project developer	Spain	Valencia region
Hydrogen Valley Anklam	Enertrag	Independent project developer	Germany	Mecklenburg-Pommerania
H2SUD Vallée	Région SUD	Regional authority	France	Provence-Alpes-Côte d'Azur
North-1 Hydrogen Valley	Hellenic Hydrogen	Project developer with O&G company as major shareholder	Greece	Western Macedonia
Amber Hydrogen Valley	ORLEN S.A.	Oil & gas and integrated energy company	Poland	Pomerania region
GreenWest PtX	UDP Renewables and Hydrogen Partners	Independent project developer	Ukraine	Western Ukraine (c. 1km to Polish Border)

Orange.bat – Spain, Valencia region (Smartenergy)

Orange.bat in a nutshell

- **Description**: A 100 MW electrolyser-based hydrogen project near Onda, Spain, designed to supply RFNBO-compliant H_2 to industrial, mobility and energy end uses via local H_2 pipeline infrastructure and the H_2 backbone. The Hydrogen Valley integrates renewable power, hydrogen production, and storage
- **Lead developer:** Smartenergy (Independent developer)
- **Electrolyser size [MW]:** 100 MW alkaline electrolyser
- **H_2 & derivatives output:** 11.5 ktpa H_2
- **Timeline:** FEED by 03/2026, start of construction by 02/2026, COD by 05/2028
- **Status:** Mostly at concept & feasibility phase



Renewable energy sourcing	H_2 production	H_2 storage	H_2 transportation & distribution	H_2 end use
260 MW solar PV	100 MW ALK electrolyser	H_2 compressor unit	Local pipelines	**Industry:** Chemicals & refineries
120 MW onshore wind		H_2 pressure regulation & metering station	H_2 backbone	**Mobility:** Road (heavy transport & logistics)
Underground power line (132kV)		Nitrogen storage unit	H_2 refueling stations	**Energy:** Ceramics
Iberdrola substation (132 kV)				

Covered directly by lead developer Covered by other members of the Hydrogen Valley/third parties

Hydrogen Methanol Ammonia e-SAF e-Naphta

Key areas of PDA support

Com-mercial
- Offtake strategy support, incl. review of current offtake, offtake contract items, offtake markets beyond local cluster

Tech-nical
- Technical due diligence (quality and status of technical documentation)
- LCoH optimization (RES sizing, BESS, other)

Regu-latory
- n/a

Valley govern.
- n/a

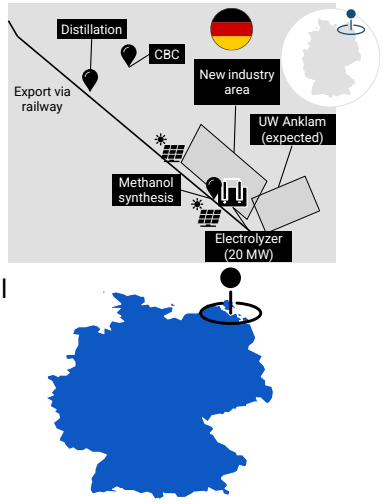
Planned next steps in the Hydrogen Valley development

- Completion and expansion of the offtake agreements for both hydrogen and oxygen
- Execution of a comprehensive OEM assessment to support the selection of the most suitable OEM and ensure compatibility with the renewable generation profile and the intended operational strategy

Anklam – Germany, Mecklenburg Pommerania region (Enertrag)

Anklam in a nutshell

- **Description**: Hydrogen Valley around a 20 MW PEM electrolyser based on renewable power and with e-Methanol synthesis to supply green methanol to maritime and agricultural offtakers. The project connects renewable energy, CO_2 feedstock, H_2 production, storage and onsite transport
- **Lead developer:** Enertrag (Independent developer)
- **Electrolyser size [MW]:** 20 MW PEM electrolyser
- **H_2 & derivatives output :** 2 ktpa H_2, 9.7 ktpa e-Methanol
- **Timeline:** FID: Late 2020s early 2030s, construction: early 2030s, COD within 2030, depending on market development
- **Status:** Feasibility phase



Renewable energy sourcing	H_2 production	H_2 storage	H_2 transportation & distribution	H_2 end use
Onshore wind	20 MW PEM electrolyser	Various buffer tanks, storage, compressors	Short onsite pipeline	**Industry:** Agri-culture, chemicals
Solar PV via PPAs				**Mobility:** Shipping

Covered directly by lead developer | Covered by other members of the Hydrogen Valley/third parties

H_2 Hydrogen | MeOH Methanol | NH_3 Ammonia | e-SAF e-SAF | e-Naphta e-Naphta

Key areas of PDA support

Com-mercial
- Development of a H_2 and e-MeOH offtake strategy
- Updated view on economic viability & timing
- Methanol market study

Tech-nical
- Challenging and optimization of technology selection and cost assumptions

Regu-latory
- n/a

Valley govern.
- n/a

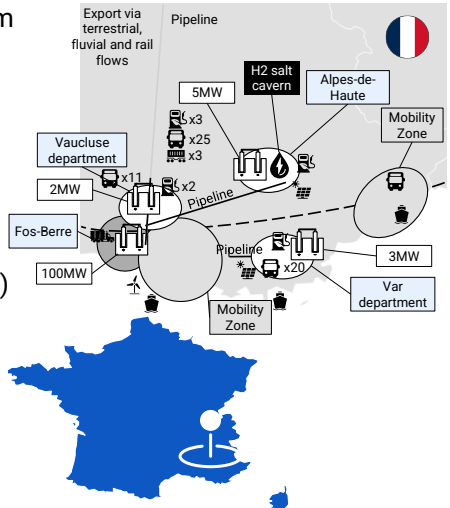
Planned next steps in the Hydrogen Valley development

- Deep-dive into the pain-points to decide on the further developments, incl. timeline and offtake options as well as political environment
- Analysis of future funding opportunities

H2SUD Vallée – France, Provence Alpes-Cote-d' Azur (Région SUD)

H2SUD in a nutshell

- **Description**: Hydrogen Valley regional ecosystem combining over 107 MW to 1,700 MW of electrolysis, large-scale storage including salt caverns, and an extensive pipeline network to supply industry and mobility end uses. The Hydrogen Valley covers the value chain from hydrogen production, storage, transport and distribution as well as offtake
- **Lead developer:** Region SUD (Regional authority)
- **Electrolyser size [MW]:** 107 MW
- **H_2 & derivatives output:** >4 ktpa H_2
- **Timeline:** Different FID & CODs
- **Status:** Pre-FID stage



Renewable energy sourcing	H_2 production	H_2 storage	H_2 transportation & distribution	H_2 end use
RES supply via PPAs	6 electrolysers with c. 107 MW in total	c. 6 kt H_2 storage in cavern	289 km H_2 pipeline network with 3 pipes	**Industry:** Chemical industry, oil & gas
		3 mobile containers	6 HRS	**Mobility:** HDVs, waste trucks, OP, vessels
			3 dispensers	
			Onsite distribution stations	

Covered directly by lead developer | Covered by other members of the Hydrogen Valley/third parties

H_2 Hydrogen | $MeOH$ Methanol | NH_3 Ammonia | e-SAF | e-Naphta

Key areas of PDA support

Commercial
- Mapping of local H_2 projects & development of project story for H_2 pipeline
- Review of key project documents
- Review of H_2 demand profiles

Technical
- Review of levelisation approach & comparison of different technologies & OEMs

Regulatory
- Review of IRICC and summary of key implications for H_2 producers
- Socio-economic impact assessment for operational project phase

Valley govern.
- n/a

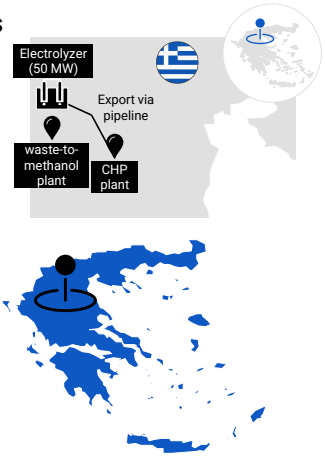
Planned next steps in the Hydrogen Valley development

- Incorporation of new insights into the regional strategy and justification for hydrogen development
- Strengthening of applications for the Hydrogen Valley and Innovation Fund calls
- Resubmission of H2Sud Vallée Proposal to the CHP Hydrogen Valley Call 2026

North-1 – Greece, Western Macedonia (Hellenic Hydrogen)

North-1 in a nutshell

- **Description**: This Hydrogen Valley in Western Macedonia is centred around a 50 MW electrolyser integrated with a waste-to-methanol (WtM) plant and a combined heat and power (CHP) facility as anchor offtakers for the H_2. The H_2 produced in the WtM plant is planned for shipping, linking renewable power to industrial and maritime offtake
- **Lead developer:** Hellenic Hydrogen (Developer with oil and gas company as major shareholder)
- **Electrolyser size [MW]:** 50 MW
- **H_2 & derivatives output:** Up to 8 ktpa H_2, e-Methanol
- **Timeline:** FID by Q2 2026, COD by Q1 2028
- **Status:** Pre-FID with basic design regarding technical concept



Renewable energy sourcing	H_2 production	H_2 storage	H_2 transportation & distribution	H_2 end use
Solar PV	50 MW PEM electrolyser	Temporary H_2 buffer storage system (HH)	H_2 connecting pipeline (DESFA)	**Mobility:** Shipping (via methanol conversion: on-site waste-to-methanol)
Onshore wind		Steel pressure storage vessel (type 1) (HH)		**Energy:** 140 MW heat and power plant (PPC)
Electricity from grid		High-pressure storage station (20-200 bar) (HH)		

Covered directly by lead developer Covered by other members of the Hydrogen Valley/third parties

H_2 Hydrogen Me OH Methanol NH 3 Ammonia e-SAF e-SAF e-Naphta e-Naphta

Key areas of PDA support

Commercial
- H_2 & derivatives market review
- Business case & financing
- Offtake guardrails

Technical
- Techno-economic optimization of RES & electrolyzer
- Cost estimate review
- GHG emission estimation

Regulatory
- Regulatory analysis of RFNBO-H_2 & LCH, EU ETS & certification schemes

Valley govern.
- n/a

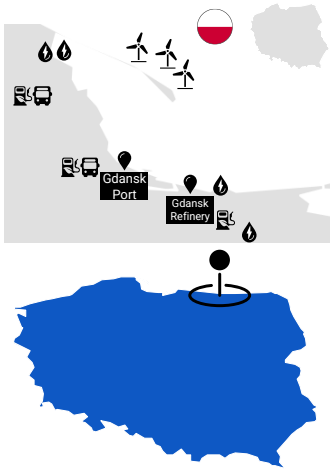
Planned next steps in the Hydrogen Valley development

- FID planned for Q2 2026
- Progression of the finalization of Power Purchase Agreements & Hydrogen Offtake Agreements

Amber Hydrogen Valley – Poland, Pomerania region (Orlen)

Amber Hydrogen Valley in a nutshell

- **Description**: The Amber Hydrogen Valley centres on decarbonizing the Pomerania public transport, Gdańsk refinery and a Gdynia port ecosystem through over 500 MW of electrolysis and large-scale H_2 and derivative production, including Sustainable Aviation Fuel. It integrates renewable power, H_2 production, storage, transport via tube trailers, and expanding refuelling infrastructure to serve mobility and industry end uses
- **Lead developer:** Orlen (Oil and gas/multi-energy major)
- **Electrolyser size [MW]:** >500 MW
- **H_2 & derivatives output:** <55 ktpa H_2, e-SAF
- **Timeline:** Various FID and COD for sub-projects
- **Status:** Mostly concept stage (large scale electrolyzers), Construction (Pure H_2, HRSes)



Covered directly by lead developer Covered by other members of the Hydrogen Valley/third parties

Hydrogen Methanol Ammonia e-SAF e-Naphta

Key areas of PDA support

Com-mercial
- H_2 mobility & small-scale H_2 offtaker market analysis
- H_2 mobility offtaker sounding in Pomerania
- Review of CHP application

Tech-nical
- n/a

Regu-latory
- Communication towards Polish government

Valley govern.
- n/a

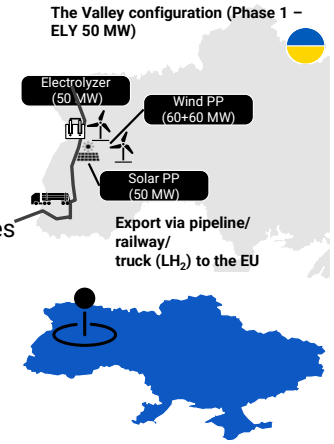
Planned next steps in the Hydrogen Valley development

- Submission of the revised Amber Hydrogen Valley application for the Clean Hydrogen Partnership funding call reflecting PDA Plus recommendations
- Review of options to reorganize and optimize the Hydrogen Valley concept based on analysis and market feedback
- Launch of structured engagement with the Ministry, including a meeting to present the STEP Seal status, EU-level funding gap, and rationale for national support
- Advancement of follow-up actions to secure offtake and speed up implementation, focusing on H_2 mobility and regional demand

GreenWest PtX – Ukraine, Western Ukraine – c. 1 km to Polish Border (UDP renewables & Hydrogen Partners)

GreenWest PtX in a nutshell

- **Description**: This Hydrogen Valley is designed as a scalable platform, centred on 500 MW of electrolysis capacity supported by 1 GW of renewable energy, with Phase 1 starting at 50 MW. It will produce green H_2 and its derivatives for offtake in Central Europe, leveraging export logistics via the Central European Hydrogen Corridor, Pan-European Corridor III, and road transport. The project is positioned as a cross-border supply hub for mobility and industrial end uses
- **Lead developer:** UDP Renewables & Hydrogen Partners (Independent developers)
- **Electrolyser size [MW]:** 50 MW (Phase 1); 500 MW (full scale)
- **H_2 & derivatives output:** 4.5 ktpa H2 (Phase 1); 50 ktpa H2 (full scale)
- **Timeline (Phase 1):** FID by 2028, COD by 2029
- **Status:** pre-FEED stage



Renewable energy sourcing	H_2 production	H_2 storage	H_2 transportation & distribution	H_2 end use
50 MW solar PV 80 MW onshore wind	50 MW electrolyser (1st phase)	Various storage & pressure systems	Central European Hydrogen Corridor Pan-European Corridor III Trucks	**Industry:** Chemicals Exp. Destin. connect. to CEHC backbone **Energy:** District heating via export **Mobility:** derivatives e.g. SAF, e-methanol etc.

Covered directly by lead developer | Covered by other members of the Hydrogen Valley/third parties

Hydrogen | Methanol | Ammonia | e-SAF | e-Naphta

Key areas of PDA support

Commercial
- H_2 market demand & offtake study
- Competitiveness assessment
- Legislative assessment
- Ready-to-build assessment

Technical
- n/a

Regulatory
- Regulatory analysis of H_2 demand & WtP drivers in EU

Valley govern.
- n/a

Planned next steps in the Hydrogen Valley development

- Finalization of FEED
- Confirmation of offtake agreements
- Supplier selection

Annex II: Call for Application for PDA support documents

Call Specifications

Introduction

Under this Call for Applications, the Clean Hydrogen Partnership aims to provide PDA services for up to 15 Hydrogen Valleys located within an EU member state or a country associated to Horizon Europe via two different tracks of support programmes, depending on the maturity of the individual Valley at hand: PDA light and PDA plus.

The PDA services will cover the following four dimensions: 1) commercial 2) technical, 3) regulatory and 4) governance.

The Annexes to this Call for Applications consist of the following documents:

- Annex I: Model Declaration of Collaboration
- Annex II: PDA Application Form
- Annex III: Declaration of Honour
- Annex IV: Letter of Commitment

Applications must be submitted exclusively via pda.h2v.eu and in English. Deadline for the submission of applications is 19/09/2025 23:59:59 P.M. (CET).

Applicants are planned to be notified of the outcome of the evaluation by mid-October 2025. The start for the Project Development Assistance is planned by beginning of November 2025.

Info Day on Friday, 18/07/2025 at 09:30-1130 AM CET on the Call for Applications and on PDA support: Link to Info Day (MS Teams Meeting).

Contact email address for questions regarding this call for applications: h2v@clean-hydrogen.europa.eu.

1. Context and background information to this call for applications for PDA support

The Clean Hydrogen Partnership (as per its legal name Clean Hydrogen Joint Undertaking), is a unique public private partnership supporting research and innovation (R&I) activities in hydrogen technologies in Europe. Its aim is to strengthen and integrate EU scientific capacity, in order to accelerate the development and improvement of advanced clean hydrogen applications.

The Clean Hydrogen Partnership is currently setting up a Hydrogen Valleys Facility aimed to support Hydrogen Valleys and a broad range of stakeholders within the hydrogen context to advance their hydrogen projects and to contribute to capacity building, knowledge sharing and skill development.

For the purpose of this Call for Application, **Hydrogen Valleys** are to be interpreted as hydrogen ecosystems that cover a specific geography ranging from local or regional focus (e.g. industrial cluster, ports, airports, etc.) to specific national or international regions (e.g. cross-border hydrogen corridor), thereby supplying with a common hydrogen supply infrastructure several sectors in their geography such as mobility, industry and energy end uses. Across their geographic scope, Hydrogen Valleys cover multiple steps in the hydrogen value chain, ranging from hydrogen production, storage of hydrogen and distribution to offtakers via various modes of transport.

As part of this Hydrogen Valleys Facility, the Clean Hydrogen Partnership will be providing critical Project Development Assistance (PDA) to Hydrogen Valleys at different maturity stages to accelerate their progress and to advance their projects towards Final Investment Decision (FID).

Under this Call for Applications, the Clean Hydrogen Partnership aims to provide PDA services for up to 15 Hydrogen Valleys located within an EU member state or a country associated to Horizon Europe[3] via two different tracks of support programmes, depending on the maturity of the individual Valley at hand: PDA light and PDA plus.

[3] Associated countries under Horizon Europe are listed here. Transitional arrangements will be taken into consideration at the time of the evaluation of this Call for any new association agreement.

The Clean Hydrogen Partnership has mandated the consulting firm Roland Berger, with its specialised subcontractors Worley and Inycom, to provide the PDA services under this call and manage the application process (PDA Service Consultants). The PDA services will cover the following four dimensions:

1) Commercial aspects (incl. renewable and derivatives production, transportation, offtake, business planning, commercial structuring as well as financing and funding)
2) Technical aspects (incl. process design, tech selection, site selection, cost estimates and risk management)
3) Regulatory aspects (incl. permits, certifications and public acceptance strategy)
4) Valley governance aspects (incl. consortium building, stakeholder management, project governance and planning)

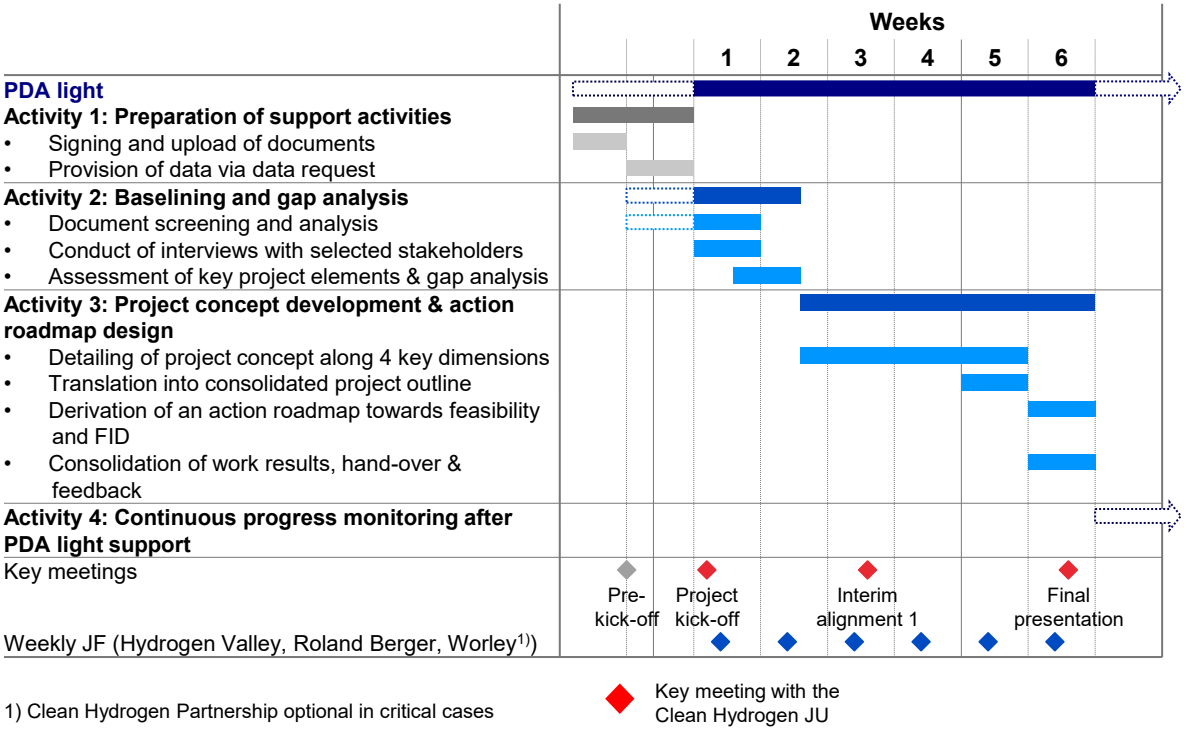
1.1 PDA light programme track

The PDA light programme is aimed at supporting early-stage hydrogen projects in advancing towards a compelling pre-feasibility project concept through structured consulting, gap analysis and standardised support packages. The total programme duration is six weeks and consists of c. 80 person days that are distributed between the PDA Service Consultants.[4]

The six-week support includes a baselining based on the hydrogen project data and documents, stakeholder interviews and the assessment of key project elements and gap analysis. Thereafter, a detailed project concept regarding commercial, technical, regulatory, as well as valley governance will be developed and translated into a consolidated project outline with an action plan on the next steps to advance the Hydrogen Valley.

Key deliverables of a PDA light include, but are not limited to a detailed gap analysis and baselining, a consolidated project presentation along the four PDA dimensions (commercial, technical, regulatory, valley governance) and a detailed action roadmap towards feasibility and Final Investment Decision stage.

The envisaged project plan for the PDA light programme track is as follows:



1.2 PDA plus programme track

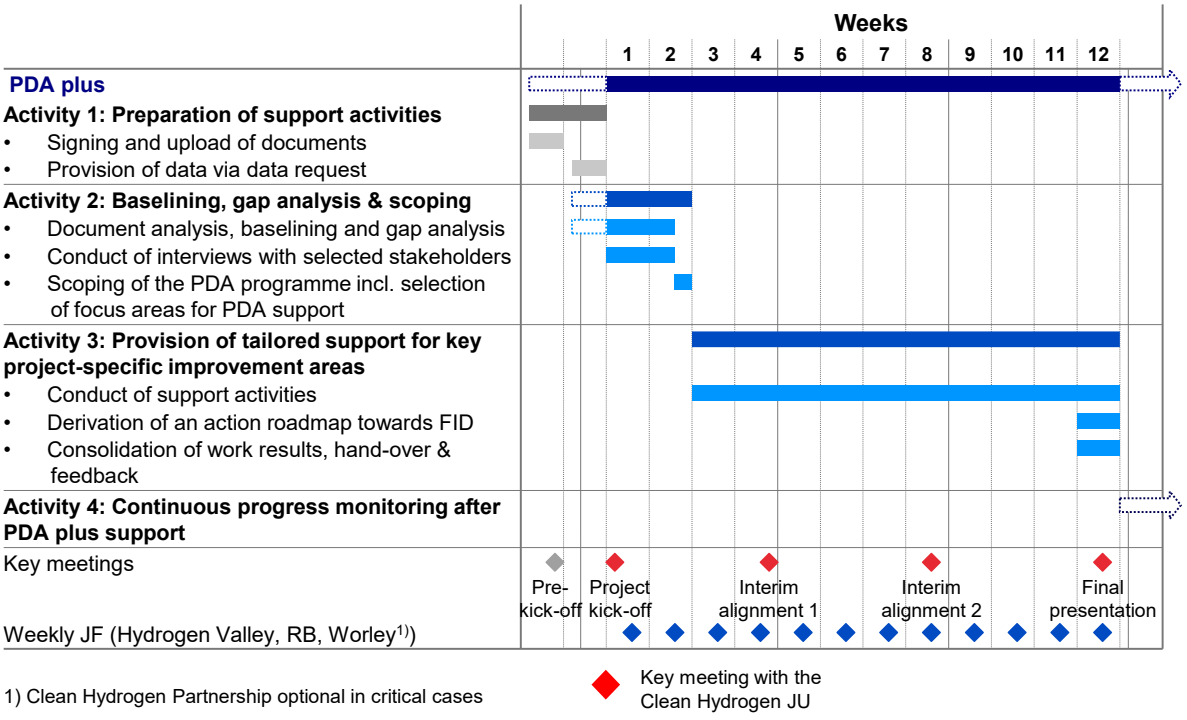
[4] The total number of person days to be allocated per PDA and for each of the four support dimensions is to be decided together with the Clean Hydrogen Joint Undertaking based on the results of the gap analysis for the respective Hydrogen Valley.

The PDA plus programme is aimed at supporting more advanced hydrogen projects that already have a concept study in place with modular, customised assistance to advance towards the feasibility milestone, and a detailed roadmap to FID. The total programme duration is 12 weeks and consists of c. 270 person days that are distributed between the PDA Service Consultants.[5]

The twelve-week support consists in the first step of a dedicated baselining based on hydrogen project data and documents, stakeholder interviews and the assessment of key project elements to derive gaps that will be addressed with the PDA plus support. As a result, within all relevant dimensions for project development (i.e., commercial, technical, regulatory and valley governance) dedicated support areas will be determined. Based on a modular approach, beneficiaries and the PDA Service Consultants will jointly identify focus areas that will be advanced and supported by the PDA Service Consultants throughout the duration of the PDA plus programme.

Key deliverables of a PDA plus include, but are not limited to a gap analysis and baselining, a detailed action roadmap towards Final Investment Decision stage and tailored deliverables according to the agreed project-specific improvement areas.

The envisaged project plan for the PDA plus programme is as follows:



2. Application for PDA support

2.1 Application process

2.1.1 Designation of a lead developer

Applications must be submitted by legal entities that are the lead developers of the respective Hydrogen Valley, i.e., the primary company or organisation officially responsible for the overall project development of the Hydrogen Valley.

The persons signing the documents that require signature (see chapter 2.2. Application documents) need to be acting as a legal representative of the lead developer organisation.

The lead developer may list as part of the application other companies and organisations that are (consortium or supporting) partners of the respective Hydrogen Valley. Such other companies or organisations are not entitled

[5] The total number of person days to be allocated per PDA and for each of the four support dimensions is to be decided together with the Clean Hydrogen Joint Undertaking based on the results of the gap analysis for the respective Hydrogen Valley.

to submit the application for Project Development Assistance. These companies or organisations are encouraged to declare their commitment to participate and contribute in the Project Development Assistance delivery via signing the Letter of Commitment (Annex IV) to be submitted by the lead developer as part of the application.

2.1.2 Submission of applications

Applications are to be submitted via the PDA programme application portal (pda.h2v.eu). Applications submitted in any other way (e.g., e-mail or by letter) will be disregarded.

In order to submit an application, applicants will need to register within the application portal.

Applicants must ensure that their submitted applications contain all the information and documents required as set out in chapter 2.2 Application documents.

After the submission, changes of the application are not possible anymore.

Only one application per applicant can be submitted.

All costs incurred for the preparation and submission of applications are to be borne by the applicants and will not be reimbursed.

Only information submitted before the application deadline will be considered for the evaluation of all applications. Applicants are not allowed to submit any information related to the application thereafter.

2.1.3 Allocation to PDA programme track (i.e. "light" or "plus")

All applicants need to fulfil the eligibility criteria as set out in chapter 3.1 Eligibility.

Eligible applicants that have completed the concept stage for the Hydrogen Valley, i.e., have completed a concept study (Front-end loading 1 (FEL 1) study[6] or equivalent) in place that covers at least 70% of the overall CAPEX of the Hydrogen Valley and with a commercial date of operations for 70% of the Hydrogen Valley of a maximum of 42 months (3.5 years) in the future as of the date of the submission deadline are eligible for the application to the PDA plus programme.

All other eligible applicants can apply for the PDA light programme.

Eligible applicants need to clearly indicate for which PDA programme track (PDA light or PDA plus) their application is submitted. Applicants cannot apply for both PDA programme tracks.

2.1.4 Signature policy

Where a document needs to be signed, the signature must be either hand-written or, preferably, a qualified electronic signature (QES) as defined in Regulation (EU) No 910/2014.

Applicants are strongly encouraged to sign with a QES[7] all documents requiring a signature and only exceptionally to sign such documents by hand. The originals of any hand-signed documents (other than the contract) do not need to be submitted but the applicant must keep them for a period of five years starting from the notification of the outcome of the procedure.

All documents must be signed by the signatories (when they are individuals) or by their duly authorised representatives.

The delegation of the authorisation to sign on behalf of the signatories (including, in the case of proxy(-ies), the chain of authorisations) must be evidenced by appropriate written evidence (copy of the notice of appointment of the persons authorised to represent the legal entity in signing contracts (together or alone), or a copy of the publication of such appointment if the legislation which applies to signatory requires such publication or a power of attorney).

2.1.5 Contacts during the application phase

[6] The Front-end loading 1 represents the definition of the scoping and conceptual design of the project with a class 5 cost estimate (+/- 65 to 35%). A FEL 1 should include as a minimum requirement the preliminary design basis, in- and outflow diagrams, an equipment list, a plot plan and a class 5 cost estimate.

[7] See here how to sign a document with a QES.

Questions on this call for applications need to be submitted via the H2V Platform via the “contact email address” button. All questions will be answered publicly on the H2V PDA application area website (without disclosing the submitting applicant). The deadline for questions regarding the call for applications is the 12/09/2025. It is the obligation of each applicant to constantly visit the website in order to stay updated with any clarifications regarding this Call for Applications and Q&A.

On July 18 at 09:30 to 11:30 AM CET, there will be a virtual information session with the purpose of presenting this call for applications, answering questions related to the call that were submitted via the contact form and, if time permits, answering of any other ad-hoc questions that might arise during the virtual information session. The virtual information session can be accessed via this link. Previous registration is not necessary.

Answers to general questions on the Call for Applications can be publicly accessed in the FAQ section (pda.h2v.eu) that will be continuously expanded based on any other incoming questions.

2.1.6 Notification of the outcome of the evaluation

Applicants are planned to be notified of the outcome of the evaluation by mid-October 2025 via the e-mail address provided by the applicant (contact person as indicated in the registration) when the application was submitted.

The same e-mail address will be used by the Clean Hydrogen Joint Undertaking and the PDA Service Consultants, for all other communication with the applicant. It is the applicants’ responsibility to provide a valid e-mail address and to check it regularly.

The start for the Project Development Assistance is planned by beginning of November 2025.

2.1.7 Legal effects of the invitation to this Call for Applications and submission of an application

This Call for Applications is in no way binding on the Clean Hydrogen Joint Undertaking. Any obligations by the Clean Hydrogen Joint Undertaking commence only when successful applicants will be awarded and when the Collaboration Agreement is signed by all parties.

Up to the point of signature, the Clean Hydrogen Joint Undertaking may cancel this call for applications without applicants being entitled to any services or compensation.

The submission of an application implies the acceptance of all terms and conditions as set out in this document and in the Model Declaration of Collaboration (Annex I).

2.2 Application documents

Every application must include the following documents:

Document	PDA light	PDA plus	Expected content	Format	Required signature	Relevance for evaluation
Business Plan	✓	✓	• Companies involved in the Hydrogen Valley • Commercial architecture of the Hydrogen Valley • Market fundamentals and status and evidence of commercial offtake agreements • Financial structure and business plan, incl. total CAPEX investment[8]	pdf document; no specific format required, based on existing documents of the applicant	n/a	Award criteria
Basic Technical Outline	✓		• Scoping and conceptual design • High-level cost estimates, incl. CAPEX and OPEX			Award criteria
Concept study		✓	• Scoping and conceptual plant design, description of supply chain and high-level construction planning and permitting plan • Information on operations, maintenance and risk management • Class 5 cost estimate, incl. CAPEX and OPEX			Award criteria
Governance and Implementation Plan	✓	✓	• Project governance structure • Implementation plan and overall timeline until COD			Award criteria
Completed and signed PDA Application Form (Annex II)	✓	✓	See Annex II	pdf document	Authorised signatories of lead developer company/ organisation	Award criteria
Signed Declaration of Honour (Annex III)	✓	✓	See Annex III	pdf document		Eligibility criteria
Letter(s) of Commitment (Annex IV)	Encouraged		See Annex IV	pdf document (one document per partner)	Authorised signatories of partner companies/ organisations	Award criteria

For the business plan, the technical concept (basic technical outline or concept study) and the governance and implementation plan, we kindly ask applicants to build on and compile already existing documents of the Hydrogen Valley. There is no page limit for these compiled documents, but applicants are asked to provide all information in a concise manner.

All documents are to be submitted in English.

[8] The business plan document must indicate the total planned CAPEX investment volume of the Hydrogen Valley. Please note that there is a minimum CAPEX investment volume of EUR 30 m or 500 tonnes of hydrogen production per year to be eligible for PDA support (see Chapter 3.1 Eligibility criteria).

2.3 Application deadline

Deadline for the submission of applications is 19/09/2025 23:59:59 P.M. (CET).

3. Evaluation and award

3.1 Eligibility criteria

In order to be considered for evaluation, applications must meet all of the following eligibility criteria:

- Submission of applications before the submission deadline via the PDA applicant's area
- Submission of all application documents in English
- No exclusion situation as per Declaration of Honour (Annex III)
- Location of the Hydrogen Valley and location of the legal entity of the lead developer organisation within an eligible country, i.e., within an EU member state or a country associated to Horizon Europe[9] (to be indicated in the application interface)
- Fulfilment of the following criteria (to be indicated in the application interface):
  a) Project should be based on clean hydrogen, i.e., hydrogen produced with renewable energy sources[10]
  b) Planned total CAPEX investment of at least EUR 30 m in hydrogen production, hydrogen storage, hydrogen transport, hydrogen distribution and hydrogen end use in mobility, industry and energy applications (renewable energy generation is excluded from planned total CAPEX investment)[11]
  c) Project is under real project development, i.e., at least has a defined project outline (this criterion is proven based on the availability of the governance and implementation plan document)
  d) Project has a defined geographical scope, i.e., specific local or regional coverage
  e) Coverage of multiple steps of the value chain from hydrogen production to storage, transport and offtake
  f) Supply of more than one end use, thereby showcasing the versatility of hydrogen in key sectors such as mobility, energy and industry

If the verification of one or more elements demonstrates that there are grounds for rejection, the application will be rejected and will not be subjected to further full evaluation. The unsuccessful applications will be informed of the ground for rejection without being given feedback on the non-assessed content of their applications.

Only applicants for whom the verification of all elements did not reveal grounds for rejection will be evaluated and ranked against the award criteria described below.

3.2 Award criteria

All applications that fulfilled the eligibility criteria, will be considered for the award phase.

The evaluation takes place based on the following four award criteria that are weighted equally (i.e., 25%).

#	Award criterion	Score	Weight	Document for assessment	Aspects to be assessed
1	**Commercial maturity**	1-10	25%	Business Plan Document	• Companies involved in the Hydrogen Valley (stakeholders involved, partnerships, history) • Commercial architecture of the Hydrogen Valley (commercial relationships, players along the value chain)

[9] Associated countries under Horizon Europe are listed here. Transitional arrangements will be taken into consideration at the time of the evaluation of this Call for any new association agreement.

[10] In early stages of the hydrogen production, low-carbon hydrogen can be used. However, there must be a clear pathway towards the use of renewable hydrogen as ultimate objective of the project. As defined in the Strategic Research and Innovation Agenda 2021-2027 (SRIA of the Clean Hydrogen Partnership, p. 20), clean hydrogen refers to renewable hydrogen, i.e. either electricity-based hydrogen produced through the electrolysis of water and with the electricity stemming from renewable sources or through the reforming of biogas or biochemical conversion of biomass.

[11] Details of the distribution of the planned total CAPEX investment volume are to be indicated in the business plan document and the basic technical outline (for PDA light applicants)/the concept study (for PDA plus applicants).

#	Award criterion	Score	Weight	Document for assessment	Aspects to be assessed
					• Market fundamentals (target markets and end users, key suppliers and offtake) • Status and evidence of commercial offtake agreements (e.g., Letters of Interest, Memoranda of Understanding, Heads of Terms) • Financial structure and business plan (financing structure regarding equity, debt and government support, financial model with key parameters and assumptions, incl. CAPEX and OPEX estimates)
2a	**Technical maturity (PDA light)**	1-10	25%	Basic Technical Outline Document	• Scoping and conceptual design (key technology options under consideration, sizing of plant, background information on site selection) • High-level cost estimates, incl. CAPEX and OPEX estimates
2b	**Technical maturity (PDA plus)**	1-10	25%	Concept Study Document	• Scoping and conceptual plant design (inputs, process, outputs) • Description of supply chain (in- and outflows) • Permitting plan • High-level construction planning • Information on operations, maintenance and risk management • Class 5 cost estimate, incl. CAPEX and OPEX estimates
3	**Governance & operational maturity**	1-10	25%	Governance and Implementation Plan document	• Project governance structure (details about key project team members and resources involved (in FTE), organisation chart) • Implementation plan and overall timeline until commercial operations date • Letters of Commitment by partner companies/organisations
4	**Contribution to REPowerEU and the Clean Industrial Deal as well as rationale for PDA**	1-10	25%	PDA Application Form (Annex II)	• Rationale why Hydrogen Valley contributes to the REPowerEU Plan, in particular the acceleration of the deployment of green energy, and to the Clean Industrial Deal • Reasoning and motivation how and why the PDA can advance the Hydrogen Valley • Explanation of how the PDA support is complementary to existing funding and will deliver a distinct and additional benefit that cannot be covered via existing funding (only in case if other public funding is received)

3.3 Evaluation procedure and ranking

Applications will be checked for eligibility and then evaluated regarding the four award criteria by an evaluation committee composed of a panel of assessors from the PDA Service Consultants and the Clean Hydrogen Joint Undertaking.

Per PDA programme, a different evaluation procedure of the award criteria takes place, i.e., PDA light applicants will be evaluated against all other PDA light applicants and PDA plus applicants will be evaluated against all other PDA plus applicants.

All eligible applications will be evaluated and ranked according to the highest scoring based on the four award criteria, thereby applying a score from 1 (unfavourable) to 10 (very favourable) with half-marks. The minimum threshold for a PDA award is a scoring of 5 out of 10 points in each of the four award criteria. If the total score between various applicants is the same, the higher rating in the fourth award criterion is decisive.

In its award decision, the Clean Hydrogen Partnership will take into account the ranking order as well as a broad geographic coverage of Hydrogen Valley projects within eligible countries.

A maximum number of 15 PDAs will be awarded in this Call for Applications. The specific distribution between PDAs light and plus will be decided based on the incoming applications.

4 Responsibilities of beneficiaries that will be awarded with PDA support

Selected beneficiaries that are awarded with Project Development Assistance support are expected to comply with certain responsibilities before, during and after the PDA support which are specified in the Model Declaration of Collaboration (see Annex I).

With the submission of an application, applicants accept the conditions set out in the Model Declaration of Collaboration and agree to sign the Model Declaration of Collaboration if awarded for a PDA programme.

5. Protection of personal data and confidentiality

5.1 Protection of personal data

If processing a reply to this call for application involves the recording and processing of personal data (such as name, address and CV), such data will be processed pursuant to Regulation (EU) 2018/1725 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data. Unless indicated otherwise, any personal data will be processed solely for evaluation purposes under this call for applications by Clean Hydrogen Partnership and the PDA Service Consultants. Details concerning the processing of personal data are available in the Privacy Statement for processing of personal data related to procurement procedures.

If you would like to exercise your rights under Regulation (EU) 2018/1725, or if you have comments, questions or concerns, or if you would like to submit a complaint regarding the collection and use of your personal data, you can contact h2v@clean-hydrogen.europa.eu by explicitly specifying your request.

The applicant's personal data may be registered in the Early Detection and Exclusion System (EDES) if the applicant is in one of the situations mentioned in Article 136 of the Financial Regulation.[12]

5.2 Confidentiality of data submitted with the application and under PDA delivery

In connection with this application as well as with the preparation and execution of the PDA services, the applicant will disclose certain confidential information. With a view to this exchange of confidential information in connection with the application and under PDA delivery, the following provisions will apply:

The Clean Hydrogen Joint Undertaking and its mandated PDA Service Consultants treat any confidential information, i.e., any information or documentation (whether communicated orally, in written or electronic form) related to the PDA which it or the PDA Service Consultants receive with this application and in relation to the PDA by the Beneficiary, its Affiliates, or its employees or consultants, confidentially and does not disclose it to Third Parties[13] without the Beneficiary's consent and only to use it for purposes of the evaluation of the applications and the conduction of the PDA.

Confidential Information shall not include information that the JU and the PDA Service Consultants for the conduction of the PDA can prove:

- was in its possession, respectively received from or on behalf of the Beneficiary before the start of the PDA;
- it has legally received from Third Parties;
- was received by it in the framework of its own, independent research; or
- that is generally known or becomes generally known

[12] Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012 (OJ L 193 of 30.07.2018, p. 1).

[13] "Third Parties" shall be anyone who is not an "Authorised Recipient", which latter term shall include (i) statutory representatives and employees of the Clean Hydrogen Joint Undertaking, (ii) advisors subject to professional secrecy obligations or (iii) subcontractors hired or other parties included with the consent of the Beneficiary.

Model Declaration for Collaboration (Annex I)

The Beneficiary intends to cooperate regarding the Project Development Assistance (PDA) to advance the development of the Beneficiary's Hydrogen Valley.

This Declaration specifies the roles and responsibilities of the Beneficiary before, throughout and after the PDA. It serves as a prerequisite for participation in the PDA programme and aims to foster continued collaboration of the Beneficiary within the Hydrogen Valleys Facility beyond the PDA period, including through knowledge sharing and capacity building.

1. Data provision

The Beneficiary will provide all data and documentation necessary for the effective delivery and implementation of the Project Development Assistance (PDA) and as specified and requested by the PDA Service Consultant. Provisions regarding data confidentiality and non-disclosure of information of data are specified in the Call Specifications.

As part of the preparation of the PDA service, the Beneficiary will be contacted one to two weeks before the official start of the PDA by the PDA Service Consultant for a data request.

The data to be provided by the Beneficiary as part of this data request will cover the key dimensions of the PDA, namely commercial, technical, regulatory and Valley governance aspects, and shall be submitted in English and in the format, scope and level of detail reasonably required by the other Parties. This includes, but is not limited to the following information:

a) **Commercial**: information on feedstock (such as renewables and other relevant feedstocks), production processes (including hydrogen and derivative production), storage and transport options (such as pipelines and vessels) and end-use applications (such as hydrogen offtakers and derivative offtakers), financial planning, commercial structure and evidence of commercial offtake agreements

b) **Technical**: information on feedstock process design, technology selection for production, site selection for storage and transport and end-use regulatory compliance

c) **Regulatory:** permitting concept for feedstock, production, storage and transport and end-use, contract management plans

d) **Valley governance:** consortium building (such as roles and relationships between partners), stakeholder management plans, project governance structures and organisational charts, project plans and implementation timelines, dissemination plans and risk management strategies

This information may be drawn from existing documentation prepared by the Beneficiary, including but not limited to the business plan, existing technical project documents (e.g., a Basic technical outline or a concept study (Front-end Loading 1 study or similar)) and government and implementation concepts.

The Beneficiary shall ensure that all data and documents provided are complete, accurate and up to date to the best of its knowledge and are uploaded to the designated shared data room prior to the commencement of the PDA activities.

2. Availability for key meetings

The Beneficiary shall ensure the timely availability of its representatives for all key meetings required during the PDA, including but not limited to the pre-kick-off, project kick-off, interim alignment meetings such as weekly Jour-Fixes and the final presentation as set out in the PDA delivery project plans.

Suitable representatives with sufficient decision-making authority and expertise shall be nominated to participate in such meetings and their attendance shall align with the frequency and notice periods specified in the project plans (see at the end of this document).

3. Adherence to schedule for the PDA

The Beneficiary is required to adhere to the agreed timeline and milestones established for the respective PDA, including the timely provision of required documents and related content. Activities shall be performed in accordance with the deadlines mutually agreed between the Parties. The Beneficiary shall notify the other Parties promptly of any expected delays and use its best efforts to mitigate any adverse impacts on the overall schedule.

The Clean Hydrogen JU reserves the right to exclude the Beneficiary from the continuation of PDA services in case of repeated failure to meet the requirements of collaboration defined in Sections 1 to 3.

4. Contribution to activities related to the Hydrogen Valleys Facility

The Beneficiary shall contribute actively to activities related to the Hydrogen Valleys Facility, including but not limited to the participation in the Hydrogen Valleys Knowledge Portal as part of the Hydrogen Valleys Facility. This contribution shall encompass sharing of lessons learnt, best practices and case studies from the Beneficiary's project experience to support knowledge exchange and capacity building within the Hydrogen Valleys community. The Beneficiary shall, where appropriate, participate as a speaker or contributor in relevant Knowledge Portal formats such as workshops, webinars, Lunch & Learn sessions, Q&A sessions and peer-to-peer learning events.

The Beneficiary is further expected to collaborate in the development of knowledge products, including but not limited to dossiers, guidelines and templates, by providing input based on its project experience, lessons learnt and insights on relevant technical, commercial, regulatory and governance topics.

Contributions may extend beyond the duration of the PDA where appropriate and shall be subject to reasonable coordination with the PDA Service Consultants and other relevant stakeholders.

5. Monitoring of project progress after the PDA support

The beneficiary will remain available to the Clean Hydrogen JU and the PDA Service Consultants after the end of the PDA support for progress monitoring activities.

The progress monitoring will take place based on the developed action roadmap that will be transferred into an online form, which will be integrated into the beneficiary area of the H2V Platform. The key contact person of the Hydrogen Valley will be required to populate the project progress within the online form every six months. The online form is only accessible for the PDA beneficiary, the PDA Service Consultants and the Clean Hydrogen JU and the information submitted will be treated confidentially and not communicated publicly.

Beneficiaries are expected to implement the timeline and action roadmap towards FID that will be developed as part of the PDA support and must report any significant delays or deviations from this roadmap. Additionally, a one-hour progress monitoring meeting with the Clean Hydrogen JU, the PDA Service Consultants and the Hydrogen Valley representatives can be scheduled if significant delays are observed.

Date:

Place:

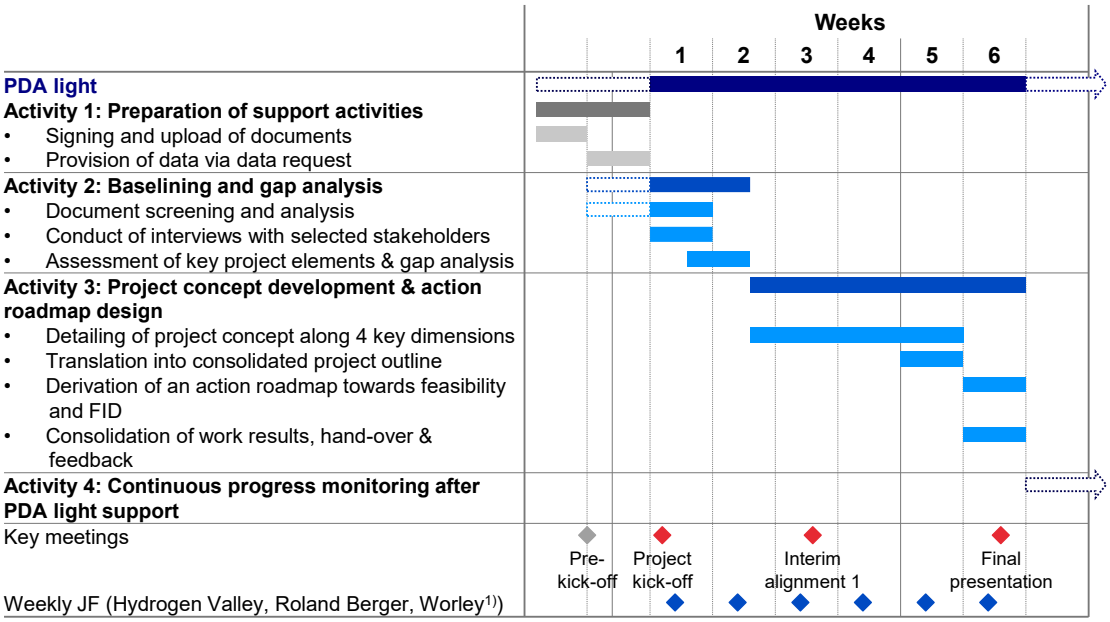
[Signature]

_____

Name:
Position:

Attachments to this Model Declaration for Collaboration:

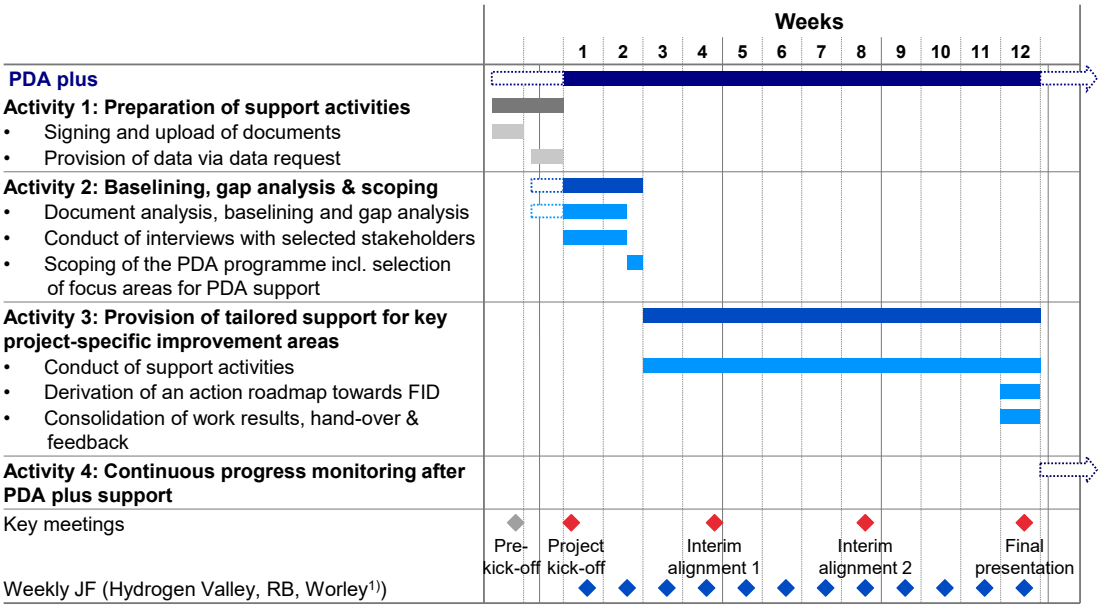
Planned project plan for the PDA light programme



1) Clean Hydrogen Partnership optional in critical cases

Key meeting with the Clean Hydrogen JU

Planned project plan for the PDA plus programme



1) Clean Hydrogen Partnership optional in critical cases

Key meeting with the Clean Hydrogen JU

PDA Application Form (Annex II)

Instructions

Please fill out and sign this form by proceeding with the following steps:

a) *Carefully fill out each section of this form, thereby paying attention to the maximum word count specified for each question to ensure your responses are concise and within limits.*
b) *Once you have completed the form, it must be signed via qualified electronic signature or in hand-written form by an authorised representative of the designated lead developer.*[14]
c) *The signed document is to be uploaded as part of the application documents to the designated Application Area in PDF form.*

The responses provided in this Application Form will be used to assess Award Criterion 4 (Contribution to REPowerEU and the Clean Industrial Deal as well as rationale for PDA).

[14] For the designation of the Lead Developer of a Hydrogen Valley, please refer to section 2.1.1 of the Call Specifications.

1. Contribution of the Hydrogen Valley to the REPowerEU Plan and the Clean Industrial Deal

1.1 Contribution to the REPowerEU Plan

Please describe how your Hydrogen Valley project contributes to the overall objectives of the REPowerEU Plan, i.e., energy savings, diversification of energy supplies and the production of clean energy, and particularly to the acceleration of the deployment of clean hydrogen production and infrastructure.

Your response (insert max. 1 page of text - approximately 500 words)

1.2 Contribution to the Clean Industrial Deal

Please describe how your Hydrogen Valley project contributes to supporting the focus areas of the Clean Industrial Deal, i.e., energy-intensive industries such as steel, metals, and chemicals and the clean-tech sector with regard to competitiveness, decarbonisation and the switch to clean energy.

Your response (insert max. 1 page of text – approximately 500 words)

2. Rationale / justification for Project Development Assistance

2.1 Rationale for and expected outcome of Project Development Assistance

Please describe the reasoning and motivation of the application of your Hydrogen Valley for the PDA programme and the specific progress and/or milestones the PDA is expected to enable for your Hydrogen Valley (e.g., finalisation of feasibility studies, business model development, permits, investor readiness, etc.).

Your response (insert max. 1.5 pages of text – approximately 750 words)

Continued Response

2.2 Additionality of Project Development Assistance

Please describe how the requested Project Development Assistance support is complementary to existing funding sources and how the Project Development Assistance will deliver distinct and additional benefits not covered by current public or private funding (if any).

Your response (insert max. 0.5 pages of text - approximately 250 words)

Date:

Click or tap here to enter text.

Place:

Click or tap here to enter text.

[Signature]

Click or tap here to enter text.

_____

Name:

Click or tap here to enter text.

Position:

Click or tap here to enter text.

Declaration of Honour (Annex III)

Instructions

This form must be filled out and signed (via qualified electronic signature or in hand-written form) by an authorised representative of the lead developer. The signed document is to be uploaded as part of the application documents to the designated Application Area in PDF form. The Declaration of Honour will be assessed as part of the Eligibility Criteria.

The undersigned [*insert name and surname of the signatory of this form*], representing the following legal person:

Full official name of the legal person: [*insert full official name of the legal entity of the lead developer*]

Official legal form: [*insert official legal form*]

Statutory registration number: [*insert statutory registration number*]

Full official address: [*insert full official address*]

VAT registration number: [*insert VAT registration number*]

Referred to below as **'the person'**.

I – Situations of exclusion concerning the person

(1) declares that the person is in one of the following situations:	YES	NO
(a) it is bankrupt, subject to insolvency or winding-up procedures, its assets are being administered by a liquidator or by a court, it is in an arrangement with creditors, its business activities are suspended or it is in any analogous situation arising from a similar procedure provided for under Union or national law;	☐	☐
(b) it has been established by a final judgement or a final administrative decision that the person is in breach of its obligations relating to the payment of taxes or social security contributions in accordance with the applicable law;	☐	☐
(c) it has been established by a final judgement or a final administrative decision that the person is guilty of grave professional misconduct by having violated applicable laws or regulations or ethical standards of the profession to which the person belongs, or by having engaged in any wrongful conduct which has an impact on its professional credibility where such conduct denotes wrongful intent or gross negligence, including, in particular, any of the following:		
(i) fraudulently or negligently misrepresenting information required for the verification of the absence of grounds for exclusion or the fulfilment of eligibility or selection criteria or in the performance of a contract or an agreement;	☐	☐
(ii) entering into agreement with other persons or entities with the aim of distorting competition;	☐	☐
(iii) violating intellectual property rights;	☐	☐
(iv) unduly influencing or attempting to unduly influence the decision-making process to obtain Union funds by taking advantage, through misrepresentation, of a conflict of interests involving any financial actors or other persons referred to in Article 61(1) FR;	☐	☐
(v) attempting to obtain confidential information that may confer upon its undue advantages in the award procedure;	☐	☐
(vi) incitement to discrimination, hatred or violence against a group of persons or a member of a group or similar activities that are contrary to the values on which the Union is founded enshrined in Article 2 TEU, where such misconduct has an impact on the person's integrity which negatively affects or concretely risks affecting the performance of a contract or an agreement;	☐	☐

(d) it has been established by a final judgment that the person is guilty of any of the following:		
(i) fraud, within the meaning of Article 3 of Directive (EU) 2017/1371 and Article 1 of the Convention on the protection of the European Communities' financial interests, drawn up by the Council Act of 26 July 1995;	☐	☐
(ii) corruption, as defined in Article 4(2) of Directive (EU) 2017/1371 or active corruption within the meaning of Article 3 of the Convention on the fight against corruption involving officials of the European Communities or officials of Member States of the European Union, drawn up by the Council Act of 26 May 1997, or conduct referred to in Article 2(1) of Council Framework Decision 2003/568/JHA, or corruption as defined in other applicable laws;	☐	☐
(iii) conduct related to a criminal organisation, as referred to in Article 2 of Council Framework Decision 2008/841/JHA;	☐	☐
(iv) money laundering or terrorist financing, within the meaning of Article 1(3), (4) and (5) of Directive (EU) 2015/849 of the European Parliament and of the Council;	☐	☐
(v) terrorist offences or offences related to terrorist activities as defined in Articles 3 to 12 of Directive (EU) 2017/541 of the European Parliament and of the Council, or inciting, aiding, abetting or attempting to commit such offences, as referred to in Article 14 of that Directive;	☐	☐
(vi) child labour or other offences concerning trafficking in human beings as referred to in Article 2 of Directive 2011/36/EU of the European Parliament and of the Council;	☐	☐
(e) it has shown significant deficiencies in complying with the main obligations in the performance of a contract or an agreement financed by the Union's budget, which has led to its early termination or to the application of liquidated damages or other contractual penalties, or which has been discovered following checks, audits or investigations by a contracting authority, the European Anti-Fraud Office (OLAF), the Court of Auditors or the European Public Prosecutor's Office (EPPO);	☐	☐
(f) it has been established by a final judgment or final administrative decision that the person has committed an irregularity within the meaning of Article 1(2) of Council Regulation (EC, Euratom) No 2988/95;	☐	☐
(g) it has been established by a final judgment or final administrative decision that the person has created an entity in a different jurisdiction with the intent to circumvent fiscal, social or any other legal obligations, including those related to working rights, employment and labour conditions, in the jurisdiction of its registered office, central administration or principal place of business;	☐	☐
(h) (*only for legal persons*) it has been established by a final judgment or final administrative decision that the person has been created with the intent referred to in point (g);	☐	☐
(i) the person has intentionally and without proper justification resisted an investigation, check or audit carried out by the contracting authority or its representative or auditor, OLAF, the EPPO, or the Court of Auditors. It shall be considered that the person resists an investigation, check or audit when it carries out actions with the goal or effect of preventing, hindering or delaying the conduct of any of the activities needed to perform the investigation, check or audit. Such actions shall include, in particular, refusing to grant the necessary access to its premises or any other areas used for business purposes, concealing or refusing to disclose information or providing false information.	☐	☐
(2) declares that, for the situations referred to in points (1)(c) to (1)(i) above, in the absence of a final judgement or a final administrative decision, the person is[15]:	YES	NO

[15] The declaration under this point (2) is voluntary and it cannot have adverse legal effect on the economic operator until the conditions of Article 143(1) (a) FR are met.

i. subject to facts established in the context of audits or investigations carried out by the European Public Prosecutor's Office in respect of those Member States participating in enhanced cooperation pursuant to Regulation (EU) 2017/1939, the Court of Auditors, OLAF, or the internal auditor, or any other check, audit or control performed under the responsibility of an authorising officer of an EU institution, of a European office or of an EU agency or body;	☐	☐
ii. subject to non-final judgments or non-final administrative decisions which may include disciplinary measures taken by the competent supervisory body responsible for the verification of the application of standards of professional ethics;	☐	☐
iii. subject to facts referred to in decisions of entities or persons being entrusted with EU budget implementation tasks;	☐	☐
iv. subject to information transmitted by Member States implementing Union funds, in particular facts and findings established in the context of a final judgment or final administrative decision at national level as to the presence of the exclusion situations referred to in points (c)(iv) or (d);	☐	☐
v. subject to decisions of the Commission relating to the infringement of Union competition law or of a national competent authority relating to the infringement of Union or national competition law;	☐	☐
vi. informed, by any means, that it is subject to an investigation by the European Anti-Fraud office (OLAF): either because it has been given the opportunity to comment on facts concerning it by OLAF, or it has been subject to on-the-spot checks by OLAF in the course of an investigation, or it has been notified of the opening, the closure or of any circumstance related to an investigation of the OLAF concerning it.	☐	☐

II – Situations of exclusion concerning natural or legal persons with power of representation, decision-making or control over the legal person and beneficial owners

Not applicable when 'the person' is a Member State or a local authority.

(3) declares that a natural or legal person who is a member of the administrative, management or supervisory body of the person, or who has powers of representation, decision or control with regard to the person (this covers e.g. company directors, members of management or supervisory bodies, and cases where one natural or legal person holds a majority of shares), or a beneficial owner of the person (as defined by point 6 of Article 3 of Directive (EU) No 2015/849) is in one of the following situations:	YES	NO	N/A
Situation (1)(c) above (grave professional misconduct)	☐	☐	☐
Situation (1)(d) above (fraud, corruption or other criminal offence)	☐	☐	☐
Situation (1)(e) above (significant deficiencies in performance of a contract)	☐	☐	☐
Situation (1)(f) above (irregularity)	☐	☐	☐
Situation (1)(g) above (creation of an entity with the intent to circumvent legal obligations)	☐	☐	☐
Situation (1)(h) above (person created with the intent to circumvent legal obligations)	☐	☐	☐

Situation 1(i) above (intentionally and without proper justification resisted an EU investigation, check or audit)	☐	☐	☐

III – Situations of exclusion concerning legal persons assuming unlimited liability for the debts of the legal person

Not applicable when 'the person' is a Member State, a local authority or legal persons with limited liability.

(4) declares that a natural or legal person that assumes unlimited liability for the debts of the person is in one of the following situations:	YES	NO	N/A
Situation (a) above (bankruptcy)	☐	☐	☐
Situation (b) above (breach in payment of taxes or social security contributions)	☐	☐	☐

IV – Other grounds for rejection from this procedure

(5) declares that the person:	YES	NO
(a) was previously involved in the preparation of the procurement documents used in this award procedure, where this entailed a breach of the principle of equality of treatment including distortion of competition that cannot be remedied otherwise.	☐	☐

V – Remedial measures

If the person declares one of the situations of exclusion listed above, it may indicate remedial measures it has taken to remedy the exclusion situation, in order to allow the authorising officer to determine whether such measures are sufficient to demonstrate its reliability. This may include e.g. technical, organisational and personnel measures to prevent further occurrence, compensation of damage or payment of fines or of any taxes or social security contributions.

Without prejudice to the assessment of the authorising officer responsible, the person or entity shall submit remedial measures that have been assessed by an external independent auditor or have been considered sufficient by a decision of a national or Union authority. The relevant documentary evidence, which illustrates the remedial measures taken and their assessment, must be provided in annex to this declaration. Remedial measures do not apply for situations referred in point (1)(d) of this declaration.

VI – evidence on exclusion criteria

The following evidence could serve as evidence:

- For situations described in points (1): (a), (c), (d), (f), (g) and (h) above, a recent extract from the judicial record or, failing that, an equivalent document recently issued by a judicial or administrative authority in the country of establishment of the person showing that those requirements are satisfied.
- For the situations described in point (1) (a), (b), recent certificates issued by the competent authorities of the country of establishment. These documents must provide evidence covering all taxes and social security contributions for which the person is liable, including for example, VAT, income tax (natural persons only), company tax (legal persons only) and social security contributions. Where any document described above is not issued in the country of establishment, it may be replaced by a sworn statement made before a judicial authority or notary or, failing Declaration on honour on selection criteria.

Date:

Click or tap here to enter text.

Place:

Click or tap here to enter text.

[Signature]

Click or tap here to enter text.

_____

Letter of commitment (Annex IV)

Instructions

This form may be filled out and signed (via qualified electronic signature or in hand-written form) by an authorised representative of the partner organisation/company of the lead developer. Per partner organisation/company, one form needs to be filled out and signed. All signed documents are to be uploaded as part of the application documents to the designated Application Area in PDF form. The Letter of Commitment(s) will be assessed as part of the Award Criterion 3 (Governance & operational maturity).

I, the undersigned,

Name: [*insert name here*]

Function: [*insert function here*]

Legal entity: [*insert legal entity here*]

Registered address: [*insert registered address here*]

VAT Number: [*insert VAT number here*]

having the legal capacity required to act on behalf of [*insert name of the entity*], hereby confirm that the entity I represent:

	YES	NO
a) is a partner of the Hydrogen Valley [*insert name of the Hydrogen Valley*];	☐	☐
b) endorses this application for Project Development Assistance support;	☐	☐
c) agrees to support the delivery of the Project Development Assistance, in case the Hydrogen Valley receives an award for Project Development Assistance under this call in line with the commitments outlined in the Declaration on Collaboration (Annex I).	☐	☐

Date:

Click or tap here to enter text.

Place:

Click or tap here to enter text.

[Signature]

Click or tap here to enter text.

_____

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