Project development assistance for regions (PDA II)

Summary presentation on activities, outcomes and learnings
17.06.2024
Where we started
Aims and approach of the PDA support

To further **widen the Clean Hydrogen JU geographical coverage** by selecting and bringing a set of up to 15 projects from Cohesion Countries, Outermost Regions and Islands to a high level of preparedness.

To provide regions and cities the necessary **technical, financial and legal services**.

Approach was adapted to individual needs of the regions.
How we progressed
Estimates from the regions (questionnaire results from March 2024)
What PDA II has achieved
Overview and project scope per supported region
What PDA II has achieved
Overview and project scale per supported region

- Central Savo Region
  H2 into gas grid, glass production
  5 MW WE
  €11 M CAPEX

- Velenje, Šavinjsko-šaleška region
  6 FCEBs and H2 export
  2 MW WE - 1 HRS
  €11 M CAPEX

- Estonian Islands
  FC ferries, FCEBs, RCVs and LDVs, Heat
  32 MW WE - 3 HRS
  €132 M CAPEX

- Tartu City
  72 FCEBs, district heating
  4.6 MW MW WE - 1 HRS
  €48 M CAPEX

- City of Plocnik
  34 FCEBs
  1 HRS
  €29 M CAPEX

- Podkarpackie Region
  Hydrogen Valley development
  112 MW WE - 3 HRS
  €180 M CAPEX*

- Košice Self-governing Region
  10 FCEBs
  3 MW WE - 2 HRS
  €38 M CAPEX

- Cluj-Napoca
  20 FCEBs
  2.5 MW WE - 1 HRS
  €19 M CAPEX

- Municipality of Galati
  20 FCEBs
  5 MW WE - 2 HRS
  €34 M CAPEX

- Regional Council of La Réunion
  10 FCEBs
  1MW WE - 1 HRS
  €13 M CAPEX

CAPEX are indicative and refer to the final phase of projects.

H2 - Hydrogen
WE - Water electrolysis
HR - Hydrogen refueling station
FCEB - Fuel cell electric bus
RL - Refuse collection vehicle
EDV - Electric delivery vehicle
LDV - Light duty vehicle
FICE - Fuel cell internal combustion engine

*Only vehicles
**Only production
Additional support to regions
Workshop series

**27.06.2023**
Seminar 1: Industry pitch - Green and clean H2 production

**18.07.2023**
Seminar 3: Overview on European policies and regulations related to hydrogen technologies

**17.10.2023**
Seminar 5: Best practices in project design & development

**12.12.2023**
Seminar 7: Proposal writing workshop

**04.07.2023**
Seminar 2: Islands Knowledge Sharing

**12.09.2023**
Seminar 4: Industry pitch - Hydrogen Refueling Technologies and Vehicles

**27.11.2023**
Seminar 6: Procurement and operatorship models

**13.02.2024**
Seminar 8: Funding and financing strategies

**14.03.2024**
Final meeting with regions
Additional support to regions

Publications

**EU Policy Support and Regulations for Hydrogen**

- Make it easier to use green hydrogen technologies
  - Drive down price of green hydrogen technologies
    - Permitting Regulations
    - Energy Taxation Directive
    - Emissions Trading System
  - Develop the market for green hydrogen
    - Alternative Fuels Infrastructure Regulation
    - Renewable Energy Directive
    - Refuelling Aviation
    - Permitting regulations
  - Raise price of alternative technologies
    - Energy Taxation Directive
    - Carbon Border Adjustment Mechanism
    - Eurovignette Directive
  - Mandatory reduction of carbon intensive technologies
    - HEV and LDV CO₂ Standards
    - Clear Vehicles Directive
    - Renewable Energy Directive
    - FuelEU Maritime

**Glidepath for hydrogen project development**

- INITIAL
- DEVELOPMENT
- FINAL

**Key outputs of the glidepath**

- Market feasibility study
- Operational feasibility study
- Technical feasibility study
- Financial feasibility study
- Project delivery plan
- Procurement strategy
- Letters of intent from stakeholders
Lessons learned
How to scale and scope a hydrogen project

„You need to survive the transition phase to change the system“

- Right scale ≠ large scale
- Innovative ≠ new
- Successful ≠ high impact

It is important to find the right scope, scale and timing of the project to become a reliable building block of the future regional energy system.

Risks to project success:
(1) Aligning scope and scale to external expectations
(2) Expect / sell economic viability in the short run
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