Workshop on Hydrogen Valleys – Session 3: Securing public financial support/public commitment/state-aid and regulatory issues

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28th February 2023
Towards an EU Roadmap for Hydrogen Valleys Workshop, Brussels
INTRODUCING SSE RENEWABLES

- UK headquartered FTSE 100 company
- 12,000 staff (1,000 in Ireland)

**Our Vision**
Be a leading energy company in a zero carbon world.

**Our Purpose**
Provide energy needed today while building a better world of energy for tomorrow.

**Our Strategy**
Create value for shareholders and society from developing, operating and owning energy and related infrastructure in a sustainable way.

- **Onshore Wind**
  - Own almost 2GW operational wind in UK and Ireland. Further 1GW in development
  - Developing assets in Europe, US and Asia

- **Offshore Wind**
  - World leading developer, operator and owner
  - Currently constructing world's largest offshore wind project, Dogger Bank 3.6GW

- **Hydro Power**
  - Own and operate 1.5GW including 300MW pumped storage
  - Further 1.5GW pumped storage in development

- **Power-to-X and Hydrogen**
  - Aim to develop, build and operate more than 1GW of ‘green’ hydrogen by 2031.

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SHAMROCK
Ireland’s Emerald Hydrogen Valley
INTRODUCING IRELAND’S FIRST HYDROGEN VALLEY IN GALWAY

Production Facility
- 10MW Electrolyser
- Permanent storage < 4 Tonnes
- Hydrogen Refuelling Station
- Tube trailer refuelling
- Pipeline to local offtakers
- Connected to 38kV grid
INTEGRATION AND COLLABORATION OF PUBLIC AUTHORITIES

- Positives
  - Well developed local partnership across the full value chain
  - Linked with strong industry networks
  - Close working with local, national, European bodies
- Main challenge – An Irish National Hydrogen Strategy is lagging

14th April 2022: Ireland’s first Hydrogen Valley was announced by An Taoiseach, Micheál Martin TD at a conference hosted by the Port of Galway

Public sector stakeholders/groups

Local Partners

SHAMROCK
Ireland’s Emerald Hydrogen Valley

Rialtas na hÉireann
Government of Ireland

SSE Renewables

COLAS

ARAN ISLAND FERRIES

Bus Éireann

Lasta Mara Teo

Ollscoil na Gáillimhe
UNIVERSITY OF GALWAY
SH2AMROCK – HYDROGEN VALLEY PROJECT

The project is supported by the Clean Hydrogen Partnership and its members.

- Coordinator: SSE Renewables Ireland
- Scope
  - Design, build and operate the Galway Hydrogen Hub
  - Set-up and demonstrate multiple end uses in Mobility and Industry
  - Research and replication programme
- €8m total grant/ €24m eligible costs
- 30 partners (globally)
  - Infrastructure
  - Research
  - Replication
- Duration: June 2023 to May 2028 (including 2 years of operations).
FINANCING STRUCTURE FOR SH2AMROCK

Budget Breakdown and Income streams

### Development and Capital Costs

**Full Hydrogen Valley**
- **SH2AMROCK – Total eligible costs**:
  - €60-80m
  - €24m
  - Clean Hydrogen Partnership – H2V
  - €8m

### Lifetime Operating Costs

- Electricity, maintenance, transportation and distribution system, insurance etc

### Revenue streams

- Contract for difference / Revenue Support Scheme top up
- Sales Price

- **EU Renewable Hydrogen Auction?**
- End user purchase agreements

Other capital grants
• Key ingredients for success
  • Strong local private sector and local council partnership drove the development
  • Spoke with one voice to key stakeholders
  • Fortuitous timing on grant funding opportunities enabled a 62%:38% Public:Private funding split
CONCLUDING REMARKS

Key Challenges

- Policy, regulatory and funding readiness misalignments.
- Compatibility of funding windows, eligibility criteria and state aid limits.
- Funding across the full value chain is needed to unlock the hydrogen eco-system.
- Absence of consistent long term revenue support for producers.

Solutions

- Hydrogen valleys are a bottom up approach to driving change in less developed regions Member States.
- Strong local partnerships speaking with one voice to help align Government and European Commission stakeholders.
- Flexibility and pragmatism of public Funders needed to enable blended funding options.
- Developers and end users need long term visibility of stable funding sources spanning the full value chain.
THANK YOU

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