Towards an EU Roadmap for Hydrogen Valleys – Regional actors and their role: double the number of valleys by 2025 and build-up skills

Session 3: “Securing public financial support / public commitment/ state-aid and regulatory issues”

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About us

- Energy group based in Greece
- Founded in 1970
- One of the top refineries in Europe
- Largest privately owned industrial complex in Greece
- Exports in more than 75 countries

- €4 bil. Investments in strategic sectors
- 92 Individual companies
- 3,000 Permanent employees
- 1,500 Gas stations
Executing One of the Largest Energy Transition Programs in South-eastern Europe

**Maintenance & Resilience**
- Facilities Maintenance
- Logistical Improvements
- Digitalisation
- Efficiency and HSSE projects

**Growth & Energy Transition**
- RES
- Petrochemicals
- Natural Gas
- Biofuels
- Hydrogen
- Decarbonisation

> € 4.0bn¹ by 2030

> € 1.5bn

> € 2.5bn
Strategic Pillars Guiding our Path Forward

**Refining, Supply & Trading**
- Operational Efficiency and Flexibility.
- Decarbonisation.
- Digitalisation.
- Diversification into Petrochemicals.

**Mobility & Retail**
- Enhanced Customer Value Proposition.
- Electrification and e-mobility.
- Lower Carbon Fuels.

**Renewable Energy**
- Diversified Operational RES Portfolio.
- Strong Pipeline for Organic Growth.
- Expansion Into New Technologies Including Batteries and Storage.

**Alternative Fuels & Circular Economy**
- Natural and Renewable Gas.
- Hydrogen.
- Advanced Biofuels.
- Waste Management and Recycling.
- Lubricants Regeneration.
- Biofuels Feedstock Development.

Driving Growth and Change Across a Diverse, Multi-Energy Portfolio.
BLUE MED: The Path Towards a Low Carbon Energy Hub in East Med


Investment* ~ €320 m.
* incl. CCS

Decarbonization of Industry and transport

Industry
-380,000 t CO2/y
Scope 1

Transport
-100,000 t CO2/y
Scope 3

H2 Captive
~36,000 t/y

H2 Export
~26,000 t/y
TRIÈRÈS - Towards the development of a hydrogen valley demonstrating applications in an integrated ecosystem in Greece
The purpose of TRIÈRÈS

Activate the development of a hydrogen market in the country of Greece and the Balkans regions and Eastern Mediterranean

Strengthen the visibility and improve the knowledge and the public awareness of strategic actors of the hydrogen value chain as well as the public perception of emerging Hydrogen ecosystems

Add value to the current hydrogen knowledge curve and support its near future take off through state of the art scientific and socioeconomical investment
The 23 of the 27 partners have been actively involved in EU funded projects, some having served as coordinators. Therefore, the TRIÈRES consortium not only will it underpin its focus to the defined objectives and goals, but these will also be communicated to the highest degree.

The first Greek H2 Valley creates a complete hydrogen ecosystem centered around the regions of Peloponnese, Western Greece, and Attica. The birth of the of the Valley is the refinery of MOH located in Agioi Theodoroi, Corinth, Peloponnese.
The well-balanced consortium consists of 27 partners from six different countries (GR, NL, CY, AT, PL, AE)

**H₂ production**
- >1,500 t of green H₂
- 22,500 t of blue H₂

**H₂ logistics**
- Network of HRS
- Virtual pipeline
- Physical H₂ and NG H₂ ready pipeline

**H₂ end users**
- Passenger cars, light duty and heavy duty vehicles and buses
- Short sea ferries
- Hotels
- Energy
- Industry
- NG via the FSRU
Partner engagement – TRIERES CONSORTIUM

The well-balanced consortium consists of 27 partners from six different countries (GR, NL, CY, AT, PL, AE)

Industry
- MOTOR OIL
- LPC
- FULGOR S.A.

Road mobility
- SOLARIS
- OLYMPIA ODOS
- AVIN
- ОΣΥ
- ENGIYONHDROS

Energy
- Diorigagas
- ΔΕΗ

Shipping
- HYDRUS
- Larnaka Port
- ECOFERRY

Public authorities
- REGION OF PELOPONNESE
- GROWTHFUND

Other Valleys
- Masdar
- New Energy Coalition

Research
- FORTH
- University of Groningen

HSE & Operations
- Nova
- NEEST
Creating new investments

TRIÈRES Valley will be a magnet for many investments and create new opportunities

- Leverage of investments
- New Job opportunities
- Maximization of the regional interest
- Contribution to the RePowerEU targets
- Contribution to the Fit for 55 targets
- CO₂ emission reduction
- TRIÈRES goes beyond mere demonstration activities and entails an investment of 115 mil. € up to 408 mil. € (leverage of investments)

8 mil. EUR
Initial Phase

408 mil. EUR
By 2028

www.moh.gr
TRIĒRĒS uses multiple financing sources

- TRIĒRĒS’s partners have a clear and structured plan to finance the investment within the Valley in line with state-aid rules.

- TRIĒRĒS grant will provide approximate 1% of the valley investment cost to set up the market and disseminate the results to attract more stakeholders.

<table>
<thead>
<tr>
<th>Financing Source</th>
<th>TRIĒRĒS</th>
<th>Other Horizon Europe</th>
<th>Connecting Europe Facility</th>
<th>Recovery and Resilience Facility</th>
<th>Loans</th>
<th>Equity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum (mil. EUR)</td>
<td>4.110.000 €</td>
<td>23.872.513 €</td>
<td>13.000.000 €</td>
<td>25.050.000 €</td>
<td>199.630.000 €</td>
<td>143.402.987 €</td>
<td>408.815.500 €</td>
</tr>
<tr>
<td>% of Total investment</td>
<td>1%</td>
<td>6%</td>
<td>3%</td>
<td>6%</td>
<td>49%</td>
<td>35%</td>
<td>100%</td>
</tr>
</tbody>
</table>
### EU and National Regulatory/Funding/State Aid H2 related Mechanisms and Regimes

#### Major EU Funding Instruments
- Innovation Fund
- CEF Energy & Transport
- Horizon Europe (Clean Hydrogen Partnership)
- EU Catalyst Partnership

#### Major EU/National Co-Financing Instruments
- Resilience and Recovery Plan
- REPowerEU
- NSRF
- Just Transition Development Fund
- Strategic Investments Law
- Development Law

#### EU/National State Aid Regimes
- IPCEI
- CEEAG

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#### Lack of National Hydrogen Strategy and Regulatory Framework (ex. H2 transportation)

#### Scarcity of national funding mechanisms and incentives for H2 value chain

#### Extremely competitive and demanding EU funding regimes for large investments (Innovation Fund)

#### Uncertainty of requirements and conditions (ex. additionality), long procedures of EU state aid regimes (IPCEI, CEEAG)

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#### BUT: Clean Hydrogen Partnership acting as a true catalyst for investments in H2
Thank you for your attention!