

Hydrogen as change agent towards a low carbon society

Bolzano, EUSALP AG9 meeting

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Rhône-Alpes**
Énergie Environnement

With the support of

La Région
Auvergne-Rhône-Alpes



Advantages of hydrogen

- Transforming renewable source electricity into hydrogen
 - store the excess production
 - to later be used in the networks
- Compensate the intermittence of renewable energies:
 - respond to the needs of the grid,
 - independent of climatic factors which can affect the production of renewable energies,
- Match supply and demand through a supply of hydrogen, mobilized on request
- Hydrogen an energy AND also an energy carrier
- Hydrogen creates value:
 - innovation opportunities,
 - decentralized energy, exploitation of renewables,
 - cost control, skill improvement and
 - job creation at the heart of companies and the territories.



Hydrogen mobility



- **Contributes to:**
 - Address the climate challenge
 - Ease the renewable energy integration
 - Help clean the air and improve the quality of life, especially in our Alpine polluted valleys
 - Ensure economic development in territories and companies, in consultation with stakeholders
 - Complementary with electric mobility
- **Hydrogen creates value:**
 - innovation opportunities,
 - decentralized energy, exploitation of renewables,
 - cost control, skill improvement and
 - job creation at the heart of companies and the territories.

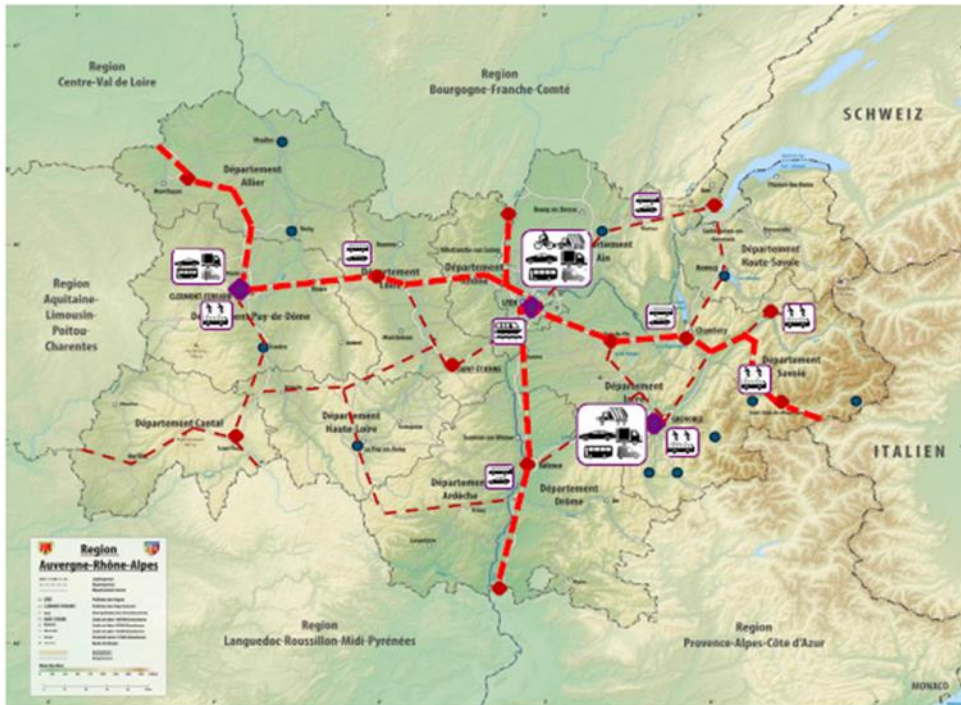
Hydrogen vehicles



- High autonomy, to ensure the continuity of your services
- Motor with good reaction time and completely silent, for your driving comfort
- Quick recharge, within minutes, at a H2 station
- Clean fuel for vehicles that have the particularity of only emitting a little water vapor!
- Not forgetting that hydrogen creates value: innovation opportunities, decentralized energy, exploitation of renewables, cost control, skill improvement and job creation at the heart of companies and the territories.

Zero Emissions Valley

- Deploy simultaneously 20 hydrogen refueling stations (including 15 with electrolyzers) and 1000 vehicles equipped with fuel cells



Infrastructure

- ◆ Grosses stations (150-200kg/j)
- Moyennes stations (50-60kg/j)
- Petites stations (15-20kg/j)

Véhicules Liaison

-  Ligne de Cars
-  Transport Individuel
-  Applications fluviales

Véhicules Usages locaux

-  Bus et SkiBus
-  Utilitaires
-  Bennes À Ordures
-  Camions urbains



Zero Emissions Valley

- Main Industrial project in Energy from regional council (2018-2023) Auvergne Rhône-Alpes
- High political support from regional council
- High support from national and european authorities
 - 70 M € project
 - 10,9 M € from EU (Connecting Europe Facility fund)
- Challenges: economic model !
 - Technology is mature
 - Stimulating demand (vehicles)
 - R&D on heavy vehicles/lorries
 - Producing Green hydrogen
 - Hydrogen/storage as a service to the the grid



Propositions for AG9

Need for european exchanges to succeed in this deployment phase

- Identification of actors (experts, clusters and meeting of alpine experts on the topic of hydrogen in general, and economic model in particular
- Collect needs in other alpine regions through a survey in next weeks
- Presentation Hydrogen and Zero Emissions Valley in Energy conference Innsbruck?



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Thank you for your attention !

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