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ADEME's calls for projects « Hydrogen Territorial Ecosystems »

Objectives, Results and Perspectives

ADEME's hydrogen calls for projects [1/2]

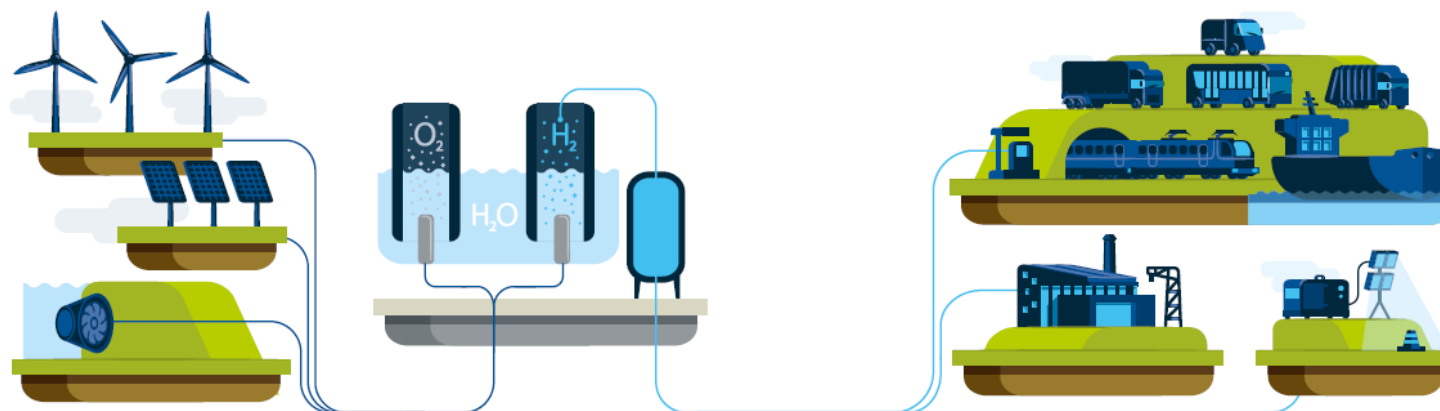
Global context

- In 2018, the **Hydrogen Plan** is published and quickly followed by a **National Hydrogen Strategy** in 2020, with the following objectives :
 - Develop the French water-electrolysis sector (aiming 6.5 GW of electrolysis installed capacity by 2030)
 - Decarbonize hydrogen mobility, especially heavy-duty vehicles
 - Invest in R&D and in the industrial sector, to create and maintain jobs
- Public financings roughly reach more than **9 billion €**, with “France Relance” and “France 2030” plans.
- **These documents framed ADEME's call for projects :**
 - “Hydrogen mobility ecosystems” call for projects in 2019 (**Investments**)
 - “Hydrogen territorial ecosystems” call for projects in 2020-2021 (**Investments**)
 - “Hydrogen technological bricks and demonstrators” call for projects since 2020 (**R&D**)

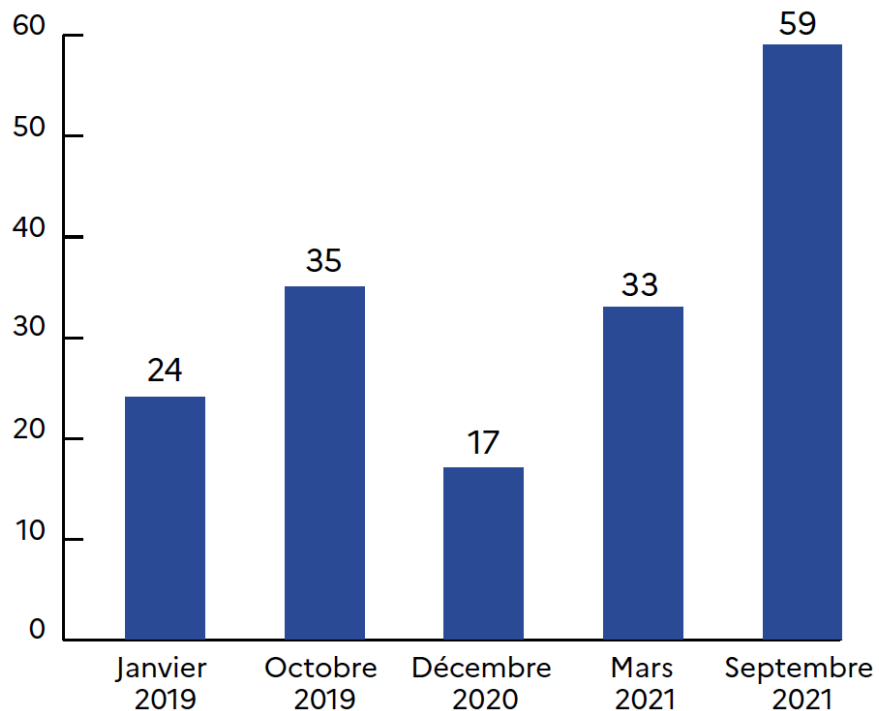
ADEME's hydrogen calls for projects [2/2]

“Ecosystems” approach

- Funding for **production** infrastructures, **HRS** and **uses** (mostly mobility)
- Eligibility based on the maturity of projects : importance of the justification of hydrogen uses, commitment of the future users
- Sizing of the hydrogen infrastructures based on identified needs
- Hydrogen should be produced by electrolysis using low-carbon and/or renewable electricity



Results of 2020-2023 “hydrogen ecosystems” calls for projects [1/3]

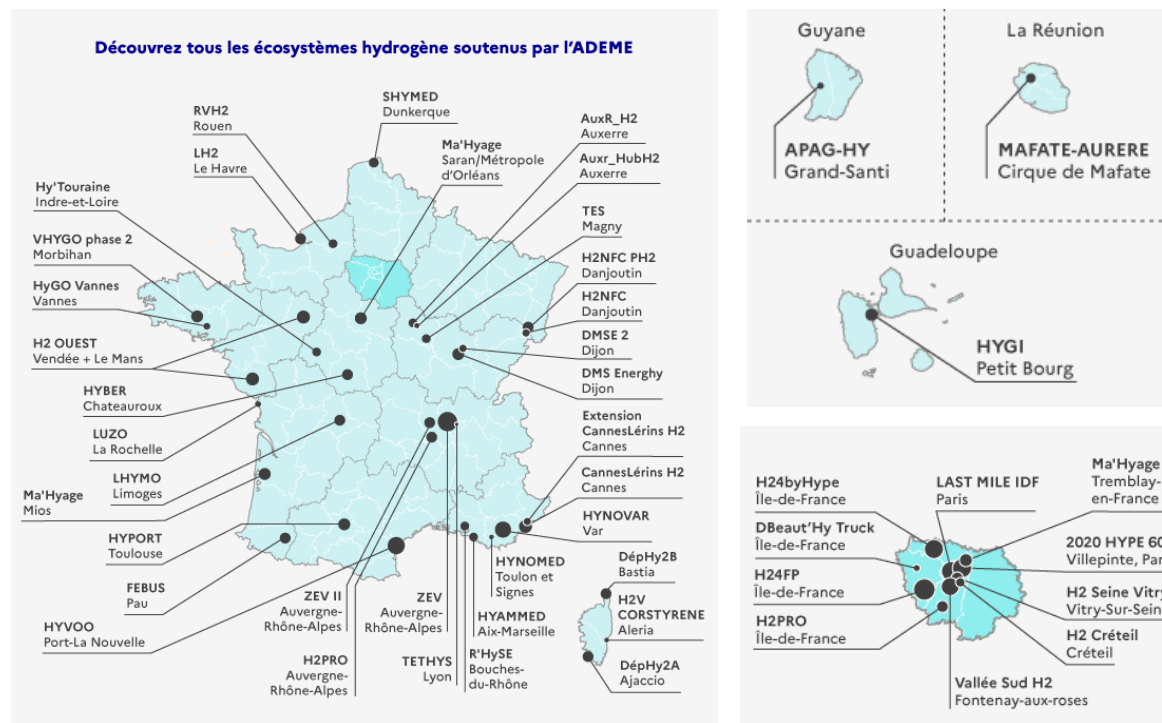


Number of applications by closing

- For both calls for projects :
 - **35 ecosystems** supported
 - **46 different projects** funded (either creation or extension of ecosystems)
 - **138 signed grant agreement**
- This represents about **320 M€** granted to project holders
- The last closing was much more competitive than the others

Results of 2020-2023 “hydrogen ecosystems” calls for projects [2/3]

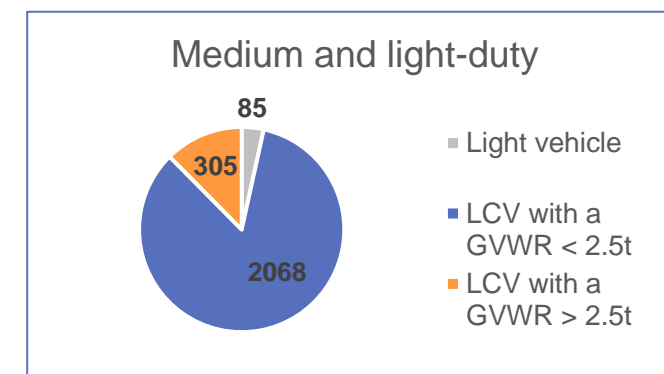
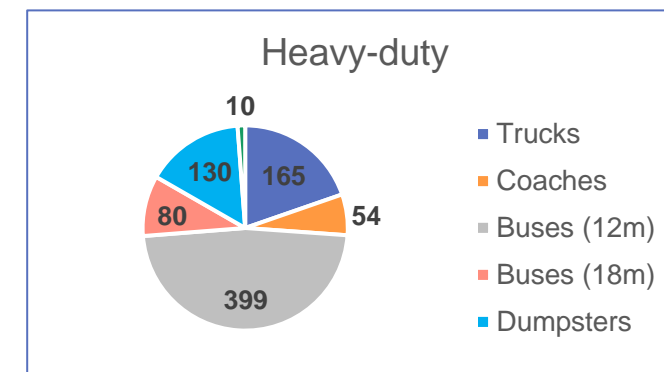
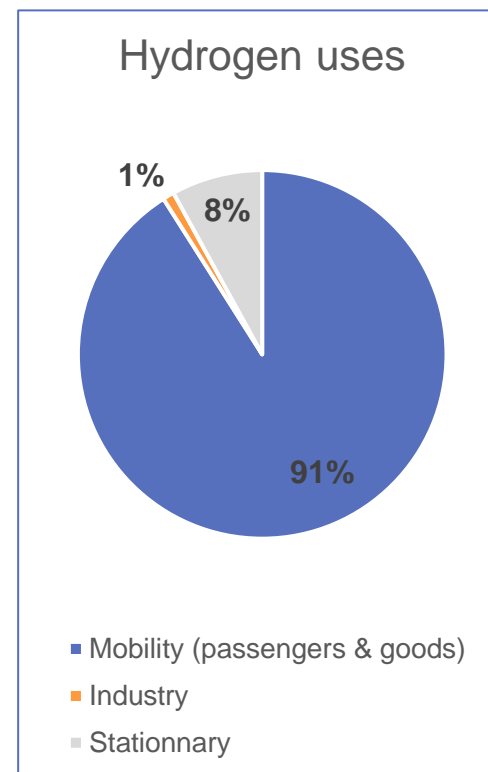
- Projects are evenly spread across France (except in some areas)
- The high density of projects in Paris region is linked to :
 - A higher need for mobility
 - The convergence of major road networks
 - Intermodal platforms (airports, logistics hubs...)



Results of 2020-2023 “hydrogen ecosystems” calls for projects : mobility focus [3/3]

Some feedbacks :

- Mobility ecosystems are far more common (fewer industrial uses)
- Decreasing announced hydrogen fuel price :
 - Between 10 and 14 €/kgH₂ for the first call for projects
 - Between 8 and 11 €/kgH₂ for the second one
- Push for retrofitted vehicles in the last closing (09/2021)
- Diversity of partners in projects : public communities, public and private investors, logisticians...



Perspectives : upcoming call for projects [1/3]

Expected projects : Hydrogen production and distribution infrastructures (including HRS), mobility and/or industrial uses

Budget : 175 M€ of subsidies on investments, allocated in 3 different categories (see below)

What's eligible ?

- Production : water electrolysis units (> 2 MW), biomass pyrolysis / gasification units (under specific conditions) (+ associated distribution infrastructures)
- Mobility uses (direct acquisition or leasing) : heavy-duty vehicles (such as buses, coaches, trucks, dumpsters, ships, special machinery, freight locomotives) or lighter vehicles with an intensive use

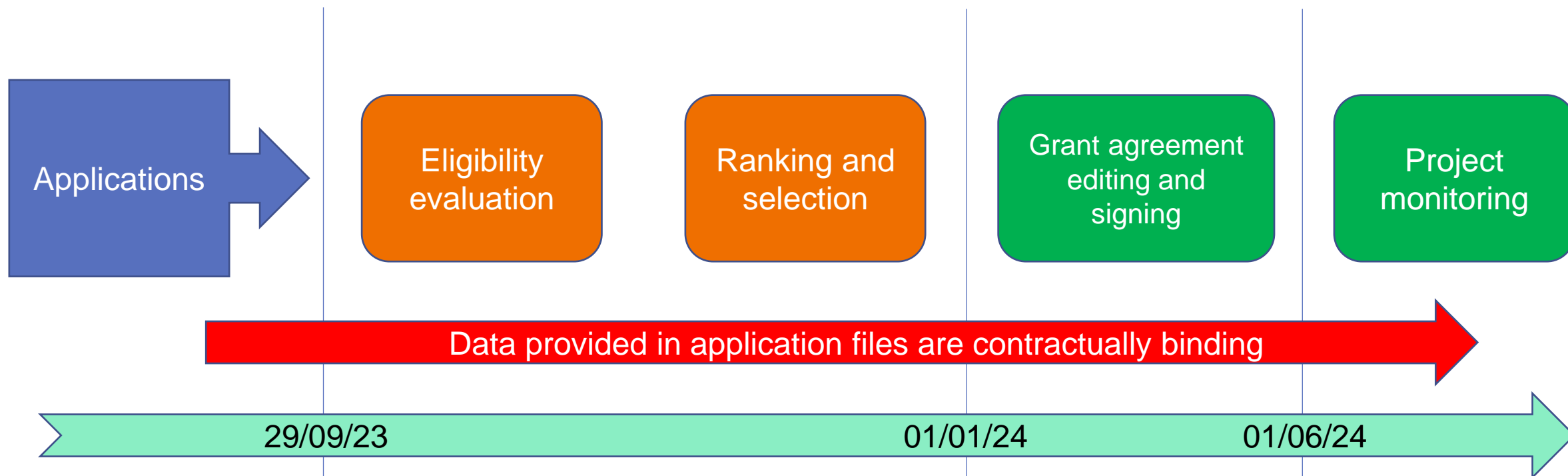
1 st category(20 M€)	2 nd category (130 M€)	3 rd category (25 M€)
New industrial ecosystems (i.e. industrial uses H2 consumption share exceeds 50 % of total H2 consumption)	New mobility ecosystems (i.e. mobility uses H2 consumption share exceeds 50 % of total H2 consumption)	Extension of existing ecosystems : new HRS and associated vehicles (H2 consumption > 30 tH2/an)

Perspectives : upcoming call for projects [2/3]

Key points:

- Infrastructures **should not be oversized** : at least 50 % of hydrogen production must be identified and secured as hydrogen consumption
- **Industrial uses are not helped directly** (although process adaptation to hydrogen consumption might be eligible for other subsidies)
- As it is a competitive call for projects, **selection among eligible projects** (in each category) will be based on **5 weighted criteria** :
 - Subsidies efficacy (70%) : $\text{€}_{\text{sub}} / \text{avoided tons of CO}_2$
 - Location near logistical or industrial hub (10 %)
 - Public involvement and/or SME participation (7 %)
 - Renewable energy as primary source energy (7 %)
 - Mobility uses efficacy (6 %)
- A swift implementation of selected projects is expected

Perspectives : upcoming call for projects [3/3]





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