An Overview of H2 Mobility Initiatives in terms of HRS Roll-out & Investment

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Scope of review & Main assumptions

• What follows is based on H2 Mobility initiatives developed for Germany & UK
  - It is not « another » H2 Mobility communication exercise.
  - It is not disclosing proprietary information.
  - It is trying to extract lessons learnt from both HRS roll-out exercises.

• Main assumptions for HRS Roll-out within H2Ms:
  - Passenger cars mostly & Top Down approach
  - Synchronisation of FCEVs & HRS deployment scenarios
  - Same Overarching Principle:
    « The HRS network roll-out aims at striking a balance between maximum customer convenience (FCEV uptake) and investment required »
  - and Same Difficulties:
    o Low initial utilization of HRS
    o Need to derisk the business case to secure initial investment
HRS network planning for H2M DE&UK:
Similar Approach (with differences)

- FCEVs Scenario(s)
- H2 Demand Curve
- Economic Modelling
- HRS network density assumptions
- HRS Scenario
- Tier 1, 2, 3 concept

- Global process is iterative
- H2 Production & Distribution optimization is next
- GIS data to be checked

- Macro-social data (GIS based)
- HRS inter distances & benchmarking
Current HRS scenarios for H2M UK & DE

- For the UK case, Base Coverage @ 65 HRS estimated to be sufficient to cover main metropolitan areas.
- Full national coverage est. @ 1,150 HRS by 2030.
- Break-even not before 2020s.
- Before 2020s, securing the initial investment is challenging due to the level of upfront investment and low revenues. Political/financial support needed.

HRS built (cumulative, 20 years lifetime)

- For Germany, Base Coverage @ ca 100 HRS estimated to be sufficient to cover main metropolitan areas.
- Full national coverage est. @ 1,000 HRS by 2030.
- Break-even not before 2020s.
- Same remark as above regarding the issue of initial investment cover. A JE type of approach is currently considered.