Trans-European Network (TEN-T) and Hydrogen
- Taking Stock,
- Looking Forward & Accelerating

**FCH 2 JU Stakeholder Forum**
- Fuel Cells & H2: From Technology to Market

**Charlemagne Building, EC, Brussels**

19 November 2015

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European Commission, DG MOVE
Directorate B – European Mobility Network
The EC Innovation Pipeline

- **Objective:** Enabling a continuous flow from research to the market in systematic way. - From vision to market roll-out.

- **Start:** Research (H2020)
- **Then:** Demonstration (H2020)
- **Goal:** Market introduction (TEN-T/CEF) *plus now also H2020*
  - Pilots to avoid expensive mistakes later & to accelerate (Studies with integrated deployment)
  - Roll-out (works)

- Feedback Loop
- Tubes (= programmes) & Flow (of ideas): *Tearing-down Barriers!*
- The Role of Agencies & Joint Undertakings
- The Role of Directives
The Role of Directives  
- Alternative Fuels for Transport Policy

**Clean Power for Transport** - a **strategy** for the long term substitution of oil in all transport modes

⇒ a coherent policy framework that guides investments
+ sustainability and competitiveness

**Directive 2014/94** on the deployment of infrastructure for alternatively fuelled vehicles (incl. ships), with common standards and consumer information – **adopted Oct 2014**

**Essential Content:**

- Member States prepare **National Policy Frameworks** and submit them by **Nov 2016**

- Minimum infrastructure coverage with common standards required

- **TEN-T urban nodes** – areas to start deploying alternative fuels infrastructure and make the link with the long distance

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**DEPLOYMENT OF ALTERNATIVE FUELS INFRASTRUCTURE**

<table>
<thead>
<tr>
<th>Alternative Fuels Infrastructure</th>
<th>Date</th>
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<tbody>
<tr>
<td>Electric vehicles recharging points – Urban agglomerations</td>
<td>2020</td>
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<tr>
<td>CNG - Urban agglomerations</td>
<td>2020</td>
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<tr>
<td>CNG - TEN-T Core Network</td>
<td>2025</td>
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<tr>
<td>Hydrogen</td>
<td>2025</td>
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<tr>
<td>LNG - Heavy duty vehicles</td>
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<tr>
<td>LNG - Maritime ports</td>
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<tr>
<td>LNG - Inland Waterways</td>
<td>2030</td>
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<tr>
<td>Shore-side electricity</td>
<td>2025</td>
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Overall Strategy: in Principle 2 Series of Important Dates


- Second series of important dates much earlier:
  - The 3 alternative "fuels" side-by-side BEV, H2FC and LNG/CNG at the start of industrialisation – the time is now (2015 & 16) to start roll-out into the markets in order to keep jobs in production in Europe; - even if not viable yet (global competition – start of mass-production in Asia and US!).
  - EC, Com. Ms V. Bulc, fully supports your efforts!
  - Several funding programmes now -> but we need to better coordinate. Plus: EIB/Juncker Plan moving into innovation arena.

- H2 Infrastructure on good way, but need to start FCH vehicle production in Europe now – buses, trucks, cars, trains, ships
The Barriers (1)

- Barrier: Demo // Market Introduction:
  - **Solution**: insertion of real-life trial after demo to prepare market-roll-out – *concept of market-sided innovation*
  - **Put into Practise**: 8 calls under TEN-T/CEF since 2010: studies with integrated deployment;
  - Legal Base updated since Dec2013: TEN-T Guidelines Art.33 plus CEF Art.10 and Annex I – Horizontal Priority
  - **Now 80 trials on the ground.**
  - 5 for H2 infra: HIT, HIT2, H2Nodes, COHRS, IAS-HyMob
  - **Plus new CEF call launched!**
The 11 plus 5 projects: tacking stock / preparing the roll-outs (* = 2014 H2 and BEV)

Innovation projects and Core Network Corridors
Results of TEN-T Innovation Calls 2010-2013
The Barriers (2)

- Barrier: Lack of grant budget and low funding intensity for innovation:
  - Solution: Creation of new financial product with EIB/B4 based on CEF & EFSI Financial Instruments; probably combination LGTT & InnoFin elements adapted to needs of innovation roll-out for transport
  - Put into Practise: Addressing the special needs of innovation: higher inherent risk, smaller size (down to 25 M€), fast-track, technical/financial advisers at Advisory Hub, no/reduced EIB evaluation fee
  - 2 waves:
    - 1. Wave: meeting of 19/10 -> pilots for LNG, H2FC & BEV
    - 2. Wave: systematic look by EIB at all real-life trials (TEN-T, others)
Overview on Next Steps

- Intermediate round of CEF MAP calls 4 November 2015
  Total about €7.5 billion of which €6.5 billion under cohesion envelope:

  Innovation (60 & 180 Mio€), MoS, Urban Nodes, ITS, etc (all "soft topics") for all EU plus separate cohesion call; about €1.09 plus €0.65 billion
  - Infrastructure works only for Cohesion Countries; about €5.6 billion
  - Info Day on 30 November 2015 in Brussels
  - Call Deadline 16 February 2016


- FCH-JU Call (early 2016 -> Bert de Colvenaer speech)

- CEF Synergy Call; at least transport & energy; perhaps also IT): Early 2016 (indicative)

- Next big round of CEF transport calls: unclear due current lack of budget, but probably on 1 October 2016

- Second round of Corridor Studies 2016&17

- Next TEN-T Days at Port of Rotterdam on 20 & 21 June 2016 (until 24/6 with back to back international conference – common exhibition 5 days!)

Overall Message for H2

- EC together with Member States is completing the minimum coverage of H2 filling stations
- Regions/cities are prepared to start systematic investment in FCH buses to address climate change and health requirements
- Europe needs now industry to produce FCH vehicles:
  - Otherwise the filling stations will never become viable
  - Asian vehicles are very welcome – congratulations to Toyota and Hyundai!
  - Must keep jobs in production also in Europe
- The "Chickens" are there, but where are the "Eggs"?
- Thank you to Solaris, VanHool, SymbioFC, and other mainly SMEs!
- The public sector (EC and Ministries) has delivered together with innovative entrepreneurs.
  - What excuses have large European OEMs now?
  - How can the EC help accelerate the production of vehicles?
- The Big Bang for H2: Synergies between transport & energy – The (truly) Green City, even more: Green Europe, a vision within our reach!
THANK YOU FOR YOUR ATTENTION!

Helmut Morsi
DG MOVE
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Coordinator for "Innovation, New Technologies & IT"