



Response to the Subsidy Scheme in Hydrogen Mobility Consultation

To: Ministry of Infrastructure and Water Management

H2Accelerate collaboration response to the proposed scheme

The H2Accelerate collaboration (formed by Daimler Truck, Iveco Group, Volvo Group, Linde, Shell, TotalEnergies, and bp) welcomes the proposed support for the roll out of hydrogen vehicles and refuelling stations from the Dutch government via the Subsidy scheme in hydrogen mobility. It has been well demonstrated that in the early deployment phases of the hydrogen trucking ecosystem, capital funding support will be needed to develop a viable business case for early adopters of the technology and provide infrastructure and vehicle suppliers with the confidence to scale up manufacturing. Specifically, the H2Accelerate collaboration welcomes the following aspects of the scheme:

- **Linkages between hydrogen refuelling infrastructure and trucks:** Members of the H2Accelerate collaboration welcome the combined development of heavy-duty hydrogen vehicles and refuelling infrastructure to solve the chicken-and-egg problem. However, as hydrogen refuelling stations (HRS) are deployed, at least 23 trucks are needed on a regular basis (minimum operation of five times per week) to provide sufficient utilisation to de-risk investment in a 1 tonne/day capacity hydrogen refuelling station.
- **Subsidy Rates:** Members of the H2Accelerate collaboration welcome the proposed subsidy rates of 40% CAPEX for HRS and 80% of the CAPEX difference for vehicles. These rates are broadly in line with other European subsidies at both the national and EU level (e.g. Germany: 80% CAPEX for HRS linked to trucks, Austria: 80% of additional CAPEX for trucks, 40% CAPEX for HRS). Well-distributed infrastructure is especially valuable in the long-haul trucking industry, which is international by nature.
- **Green hydrogen:** To ensure the availability of renewably produced hydrogen for road mobility, the H2Accelerate collaboration supports a strong incentive scheme for RFNBO hydrogen under the renewable energy directive in the Netherlands. The multiplier for HBEs of 2.5x for RFNBOs is welcomed by the collaboration. However, the green hydrogen supply is expected to scale up from 2025 onwards (through the realisation of projects such as Holland Hydrogen I in 2025). As such, the timeline for the requirement for exclusively renewable hydrogen in the Netherlands should match the expected realisation of a secure green hydrogen supply. Where zero-emission hydrogen is unavailable, there should either be a corresponding investment (and funding support) for electrolyser deployment or provision for transition to renewable hydrogen within a defined timeline.
- **Station redundancy:** H2Accelerate supports placing priority on developing HRS in urban junctions where HRS are currently present. Developing redundancy in a hydrogen refuelling station network improves the refuelling experience and enables reliability for the customer by minimising the risks of stranded vehicles.
- **Station capacity:** H2Accelerate welcomes the alignment of the minimum HRS capacity with AFIR regulations of 1 tonne/day. Additionally, the preference for larger stations will likely be beneficial for the business case for hydrogen trucks. Reports have shown that increasing station capacity results in improved economics and enables a reduction in the price of

hydrogen at the pump, and this decrease is critical to improving the hydrogen truck use case for customers¹.

H2Accelerate Collaboration proposals for improvement of the scheme

The H2Accelerate collaboration however believes changes could be implemented to the scope of the scheme to enable the most effective development of the heavy-duty hydrogen mobility in the Netherlands.

- **Number of hydrogen trucks to enable positive economics:** Members of the H2Accelerate collaboration have noted that a minimum of 23 fuel cell hydrogen trucks (based on the required 70% utilisation for HRS and an average demand of 30kg H₂/day per truck) are needed to de-risk the investment into a 1 tonne/day HRS. From previous total cost of ownership calculations undertaken by H2Accelerate, a €360k subsidy is currently needed for heavy duty articulated hydrogen trucks² (which is slightly higher than the proposed subsidy rate). The subsidy scheme currently allocates €3m of the total funding to vehicles, which will enable only 10 heavy duty FC tractor trucks (N3) to be deployed. This number of fuel cell trucks will likely not provide sufficient demand to de-risk a 1 tonne/day HRS.
- **Request for increased hydrogen truck funding to enable increased deployments:** Funding has been awarded from the Connecting Europe Facility Transport (CEF-T) to H2Accelerate members to develop and build new HRS in the Netherlands. However, there has not been sufficient funding for the deployment of heavy-duty trucks. While there are still calls such as CEF-T available for HRS, there is currently no European-wide funding call for hydrogen-fuelled trucks. To minimise underutilised HRS, the H2Accelerate collaboration suggests that the allocation of the funding allows for flexible distribution between hydrogen-fuelled trucks and HRS. The group proposes that the option be provided to include a non-funded refuelling station within the funded project, provided that it meets the specifications outlined in the scheme, including construction locations and timescales. This would mean that €5m could then be available for the deployment of hydrogen trucks, thus almost doubling the potential truck deployment at the same funding rate from potential applicants to roughly 17 hydrogen trucks. This will secure the final investment in the HRS already funded under the CEF AFIF scheme.
- **Timeline of the scheme:** The scheme text outlines that projects are required to be completed within 24 months after the subsidy has been awarded. Many major truck OEMs in Europe have publicly outlined that they aim to have hydrogen trucks commercially available from the late 2020s (e.g. Volvo and aims to deploy trucks before 2030³, Daimler aims to start series production of hydrogen trucks in the second half of the decade⁴, and Iveco will demonstrate an initial trial fleet of hydrogen trucks in Q4 2023⁵). Given the early stage of the heavy-duty hydrogen sector in the Netherlands and Europe, with the first call for this scheme occurring in 2024 and projects required to be completed within 24 months

¹ Hydrogen Mobility Europe, 2020, [Business Case Assessment and Customer Value Proposition Analysis](#). Note that this report is specific to light-duty vehicles, but similar conclusions on impacts of station capacity are applicable for heavy-duty vehicles.

² H2Accelerate, 2022, [Analysis of cost of ownership and the policy support required to enable industrialisation of fuel cell trucks](#)

³ [Volvo Trucks tests hydrogen-powered electric trucks on public roads](#)

⁴ [Mercedes-Benz Trucks provides outlook on hydrogen-based GenH2 at IAA Transportation 2022 in Hanover](#)

⁵ [IVECO to produce and market its Heavy-Duty Battery Electric Vehicle and Heavy-Duty Fuel Cell Electric Vehicle under its own brand](#)



after the subsidy has been awarded, this could lead to the delivery of hydrogen trucks being required by the end of 2026. The extension of this timeline to 36 months after grant agreement can ensure that multiple truck OEMs are able to supply well-tested vehicles beyond their home bases and in the Netherlands. Furthermore, this extension will also decrease the risk for hydrogen refuelling station operators to have invested in equipment that is not utilised.

For questions, please contact info@h2accelerate.eu

About H2Accelerate

H2Accelerate is a collaboration agreement signed between the participants under which the participants will work together to:

- seek public support to fund early pre-commercial projects to activate the market on the path towards a mass market roll-out;
- communicate around the technical and commercial viability of hydrogen fuelled trucking at scale; and
- hold discussions with policy makers and regulators to encourage policies which can support a sustainable and speedy activation of the zero emissions long haul trucking market.