



## Response to EU public consultation on

### Accounting methods and conditions for the 10% renewable energy in transport target – and on the need for additional types of biofuels being listed in Annex III of the Renewable Energy Directive

#### NEW-IG

*The NEW Energy World Industry Grouping (NEW-IG) is the private partner in the FCH Joint Undertaking and represents the private hydrogen and fuel cell sector. The objective of the NEW-IG and the FCH JU is to kick start the market for commercial applications fuel cell and hydrogen technology and to ensure a role of market leader for European companies in this field.*

#### Contribution

The NEW-IG welcomes the opportunity to contribute to PART B of the public consultation to present a view on what method(s) could reasonably be applied to calculating the contribution of hydrogen originating from renewable sources for counting towards the 10% target'.

Hydrogen is very likely to be used for transport, as various car manufacturers (such as Daimler, GM-Opel, Ford, Toyota, Nissan, Honda, or Hyundai) have collectively and publicly announced their intention to commercialize hydrogen fuelled fuel cell vehicles by 2015. A European type approval regulation for hydrogen vehicles is in place since 2010. Implementation plans are currently being devised for the deployment of a hydrogen refueling infrastructure.

In that context, the Fuel Cell and Hydrogen Joint Undertaking (FCH JU) Multi Annual Implementation Plan (MAIP) projects that the consumption of hydrogen produced from renewable sources of fuel cell electric vehicles will account for 0.1% of the energy consumed by passenger vehicles road transport in 2020. This corresponds to an installed hydrogen production capacity from biomethane and by electrolysis of approximately 100 ton per day, which is achievable by 2020 according to industrial market analysis <sup>1</sup>.

Having a target on the fraction of energy consumed from renewable sources in 2020 and beyond, is a key driver for the development of electric vehicles, and fuel cell electric vehicles in particular. This would help the take off of this specific transport mode, reducing costs and encouraging alternative production sources. This should be especially encouraged considering that battery and fuel cell vehicles are the only transport modes that have a zero tail-pipe

---

<sup>1</sup> The study "A portfolio of power-trains for Europe: a fact based analysis" (McKinsey 2010) assumes a production by distributed electrolysis and distributed SMR of approx. 140 t/d in 2019



emissions at the point of consumption, not only zero CO<sub>2</sub> emissions, but also zero NO<sub>2</sub>, SO<sub>2</sub> and particles emissions<sup>2</sup>.

1. Which are in your view the most likely ways to produce hydrogen from renewable sources (partly or fully) by 2020?

All of the following are likely ways to produce hydrogen from renewable sources by 2020:

1. From biomethane, e.g. by steam reforming/partial oxidation
2. From a mixture of natural gas and biomethane, e.g. by steam reforming/partial oxidation
3. On the basis of renewable electricity, by electrolysis
4. On the basis of the electricity mix from the grid, by electrolysis

Production of hydrogen from biomass directly, e.g. by gasification/partial oxidation is also likely by 2020, although at a smaller scale as this route requires further R&D.

The hydrogen produced by such means is likely to be overwhelmingly allocated to transport application, as it is the key driver for developing this type of production.

Hydrogen produced for transport applications by electrolysis from grid (route n°4), is most likely to be generated using electricity certified as originating from a renewable source.

Similarly, with the appearance of a biomethane component in commonly available natural gas, hydrogen produced from natural gas will also qualify as originating from a renewable source when certificates of origin for the corresponding amounts of biomethane are acquired.

2. For each option you selected under (2), if it would be used for transport, how would you suggest to calculate its contribution to the 10% target for renewable energy in transport?

The most accurate approach for determining the contribution of hydrogen to a target for renewable energy in transport would be to collect the amount of hydrogen from a renewable source sold or delivered in refueling stations. This implies the establishment of a certificate of origin system for hydrogen, but which is not in place today.

---

<sup>2</sup> According to the recent Aphekom study conducted in 12 European countries living near busy roads could be responsible for some 15-30% of all new cases of asthma in children; and of chronic obstructive pulmonary disease and coronary heart disease in adults 65 years of age and older. The associated economic burden could total €300 million every year  
[http://www.invs.sante.fr/presse/2011/communiqués/cp\\_aphekom\\_010311/Aphekom\\_summary\\_report.pdf](http://www.invs.sante.fr/presse/2011/communiqués/cp_aphekom_010311/Aphekom_summary_report.pdf)



In this context, and considering that it is important to include and show the contribution of all the alternatives that have a strong potential of playing a major role in the transition towards a sustainable energy system, while aiming to avoid an administrative burden that would be excessive in the early stage of development, we suggest that until 2020 the contribution of hydrogen to the 10% target be evaluated by counting all of the hydrogen dispensed to vehicles as renewable.

NEW-IG would be very pleased to further engage in and contribute its expertise to the development of any method with an impact on hydrogen.

On behalf of NEW-IG

Pierre Etienne France  
Director Future technologies Air Liquide  
Chairman of the Board of NEW-IG

For more information please contact the NEW-IG Secretariat

NEW-IG Secretariat  
Ms Ilse van Hartevelt  
Avenue Marnix 23  
1000 Brussels  
Direct: ++32 2 289 09 49

---

**NEW-IG Secretariat**  
Avenue Marnix 23, B-1000 Brussels Belgium  
Tel: +32 2 540 87 75 Fax: +32 2 513 05 77  
secretariat@fchindustry-jti.eu  
www.fchindustry-jti.eu