

## EEB contribution to “Clean energy – an EU hydrogen strategy” consultation

The EEB looks with attention to the formulation of a New Strategy on Hydrogen for Europe. While there is merit in exploiting opportunities provided by this new energy carrier, the EEB strongly holds that the implementation of related policies on hydrogen should be subject to a precise and preventive assessment of both realistic future consumption and domestic potential.

In this sense, we would like to highlight some key messages:

- Hydrogen might play an important role in European energy and industrial policies of the future, as it is enjoying strong and wide political support in the Union. Therefore, we call on the EC to ensure **full participation of CSOs and independent experts** in the development of the regulatory framework and financial tools (including State aid) that will deliver the New strategy on Hydrogen for Europe, with an aim to address multiple social and ecological challenges and balance public, societal and private interests in the “European Clean Hydrogen alliance”. To ensure the effectiveness of the governance of this proposed ‘alliance structure’, the EEB deems **necessary to establish minimum criteria and elements for their target setting, regular monitoring, and evaluation.**
- The debate around Hydrogen at European and national level has been recently defined by the use of the color code “Green/Blue/Grey”. We believe this code is confusing as it does not really expose the difference between the different matrixes of origin of the gas and their real environmental impacts. Therefore, we believe such coding should not be used in official documents. We also believe the term “**clean hydrogen**” is **misleading**. The correct definitions to avoid confusion should be **renewable hydrogen** (using only renewable electricity via electrolysis) and **fossil hydrogen** (all other types).
- In this sense we believe that only renewable hydrogen could be compatible with the target of climate neutrality because existing CCS and CCUS technologies are not proven scalable, neither are they 100% efficient. Moreover, relying on fossil gas will lock Europe in a scenario of dependency from external imports, unsustainable resource exploitation and continued climate emissions due to the methane emissions along the value chain (i.e. leaks, gas flaring).
- Renewable hydrogen will require a strategic and quick upgrade of both production and distribution of renewable electricity and will have to be dealt with in the framework of the Energy Union governance, namely the upcoming Strategy for **Smart Sector Integration**. This shall include a clear **roadmap on the deployment of hydrogen facilities** and variable renewables capacities, and the adaptation of targeted demand sectors.

- Hydrogen is and will continue to be for at least a decade a scarce and expensive resource, as scaling up will take time, hence it should **only be used in a targeted and prioritised way**. Hydrogen use will need to be targeted at industrial processes that are not easily directly electrified, such as low carbon iron production via Hydrogen Direct Reduction of Iron.
- Hydrogen use in industries will require a European hydrogen transport network. Dedicated hydrogen transport networks serving industrial clusters will allow for industries to transition to dedicated hydrogen zero-carbon processes. **Blending** of hydrogen with fossil gas in the fossil gas grid **will not result in the required emission reductions** and will preclude dedicated hydrogen processes and retain the transmission and use of fossil gas.
- Recent studies (*Fraunhofer institute*<sup>1</sup>, *UK' CCC*<sup>2</sup>, among others) have clearly demonstrated that the use of **hydrogen for domestic heating is neither economically compatible nor environmentally desirable**. The use of hydrogen-ready or Hydrogen-mix boilers for heating homes will have the sole result of preventing the switch of the home heating systems to overall more efficient and more cost-effective options such as heat pumps and renewable electricity.

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<sup>1</sup> [https://www.iee.fraunhofer.de/de/presse-infothek/Presse-Medien/Pressemitteilungen/2020/Wasserstoff\\_Fokus\\_Gebaeudewaerme.html](https://www.iee.fraunhofer.de/de/presse-infothek/Presse-Medien/Pressemitteilungen/2020/Wasserstoff_Fokus_Gebaeudewaerme.html)

<sup>2</sup> <https://www.theccc.org.uk/publication/hydrogen-in-a-low-carbon-economy/>

