

Annex:

Catalogue of policy recommendations:

The scientists call upon policymakers to:

1. **urgently increase the generation of renewable electricity**, which should be used directly where possible, and is indispensable for renewable hydrogen production
2. **remove subsidies, taxes, levies and other incentives for fossil fuels**, which continue to distort energy markets and limit the growth potential for renewable hydrogen and synthetic fuels.
3. **include independent experts** beyond the Clean Hydrogen Alliance in the work to identify and develop measures for removing market barriers.
4. **strengthen carbon pricing** by revising the Emissions Trading Directive to stimulate markets for renewable hydrogen and hydrogen derived synthetic fuels.
5. **introduce new regulations** (besides the Emissions Trading System) to accelerate change from fossil to renewable hydrogen in chemical and other industries including steel production.
6. **build investor confidence** by supporting stakeholders working together in local hydrogen networks (Member States, industry, civil society, and science community).
7. **promote sustainable development of hydrogen markets**, beginning with local or regional networks close to renewable electricity supplies, hydrogen production plants, and hydrogen consumption centres.
8. **establish strong links for coordination of energy governance structures** between EU, national, regional and local levels.
9. **secure supplies of renewable hydrogen from outside the EU** (in addition to EU production) by establishing international partnerships and trade cooperation with interested third countries as well as with EU neighbours.
10. **promote investments** in renewable hydrogen and hydrogen-derived synthetic fuels with a focus on minimizing the energy invested, as well as accounting for the overall life cycle costs, per unit of GHG emission reduction.
11. **encourage investment in renewable hydrogen** by promoting the EU taxonomy with its disclosure obligations for environmentally sustainable economic activities.
12. **establish standards for hydrogen production** based on lifecycle GHG performance, and certification of low carbon hydrogen to use with EU taxonomy for investments.
13. **support the rapid development of electrolyzers**, prioritising those with falling costs and fast market diffusion and learning curves, to accelerate hydrogen production.
14. **prohibit the use of whole trees** for producing renewable hydrogen by using sustainability criteria which limit carbon payback times to less than 10 years.
15. **support research, market studies and demand driven initiatives** on hydrogen infra-structure (local, national and international) and on certification and standards.