



DIN

# Supporting the European hydrogen industries through standardisation (CEN/CENELEC CoG H<sub>2</sub>)

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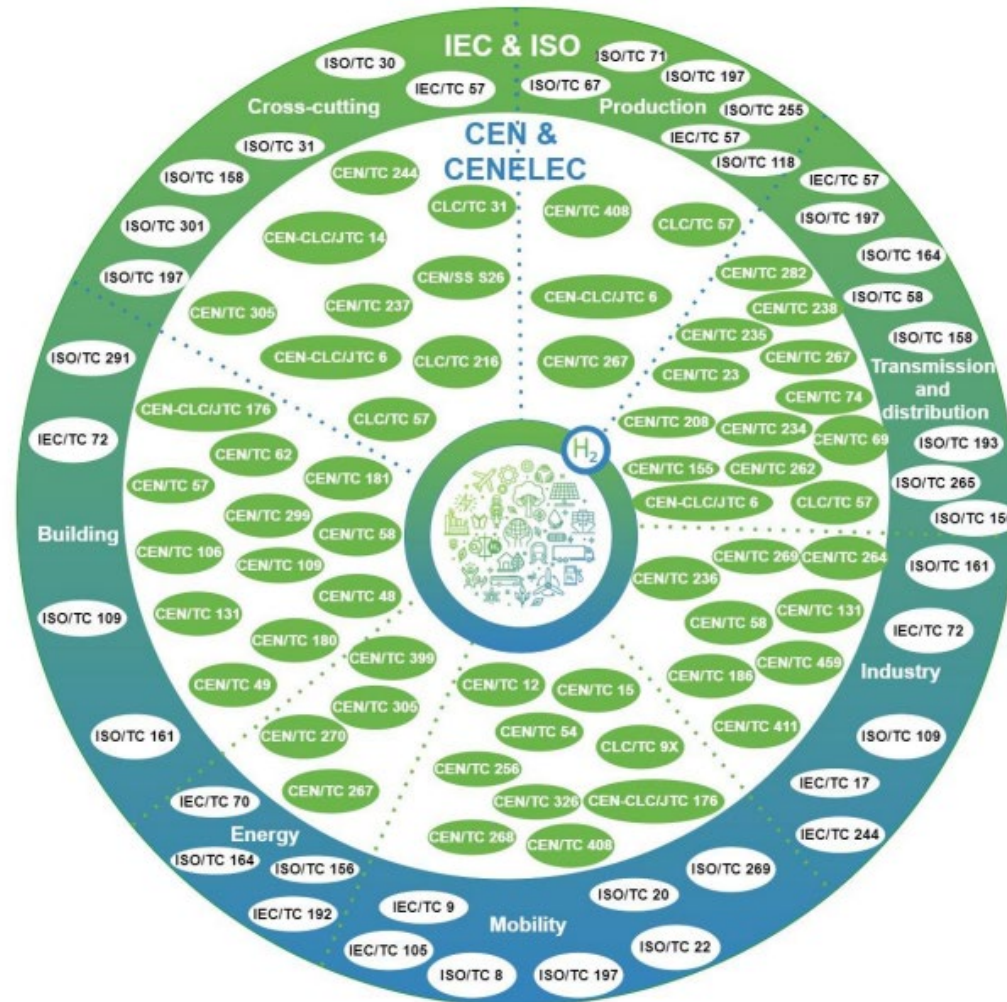
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# Structure

- Status quo of hydrogen standardisation
- ECH<sub>2</sub>A Roadmap and need for coordination
- CEN-CENELEC Coordination Group on Hydrogen
- Current activities of the H<sub>2</sub> Coordination Group
- Challenges in the H<sub>2</sub> Coordination Group work
- Next steps – Recommendations for action

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# Status quo of hydrogen standardisation

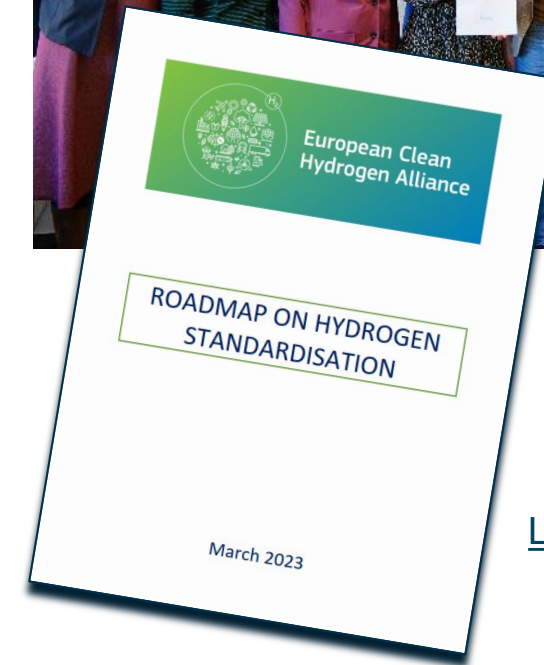


Source: ECH<sub>2</sub>A Roadmap, 2023

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# ECH<sub>2</sub>A Roadmap and need for coordination

- Hydrogen as horizontal topic of European and international standardization for several years
- EC recognizes standardization as a tool for the creation of a hydrogen industry in the EU
- March 2023: Handover of the European Clean Hydrogen Alliance's (ECH<sub>2</sub>A) Roadmap on hydrogen standardization by the EC to CEN/CENELEC
- October 2023: CEN and CENELEC Workshop “Coordination of the European hydrogen standardization and collaboration with ISO/IEC”, Berlin, proposed by DIN and organized together with CCMC
- June 2024: **Establishment of CEN and CENELEC Coordination Group on hydrogen standardization (CEN-CLC/COG Hydrogen)**



[Link to Roadmap](#)

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# CEN-CENELEC Coordination Group on Hydrogen

- Tasks

- Establish coordination mechanisms between technical committees dealing with standardisation activities on hydrogen
- Support implementing the European Union strategy on hydrogen, in particular that of supporting the further development of hydrogen production, transmission, storage and distribution infrastructures as well as industry use and end-use appliances throughout the European Union
- No development of standards

- Lifetime: 2 years (3 meetings per year, online and face to face)

- Members

- Representatives of all relevant CEN and CENELEC Technical Committees (+50 TCs)
- Representatives of National Standardisation Bodies (DIN, AFNOR, UNMZ, UNE, ...)
- Possibility to invite guests, e.g., EC, European associations in the field of H<sub>2</sub>

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# Involved Technical Committees (1)

- CEN/CLC/JTC 6 “Hydrogen in energy systems”
- CEN/CLC/JTC 10 “Material efficiency aspects for products in scope of Ecodesign legislation”
- CEN/CLC/JTC 14 “Energy management and energy efficiency in the framework of energy transition”
- CEN/CLC/JTC 17 “Gas Appliances with Combined Heat and Power”
- CEN/TC 12 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries”
- CEN/TC 15 “Inland navigation vessels”
- CEN/TC 23 “Transportable gas cylinders”
- CEN/TC 48 “Domestic gas-fired water heaters”
- CEN/TC 49 “Gas cooking appliances”
- CEN/TC 54 “Unfired pressure vessels”
- CEN/TC 57 “Central heating boilers”
- CEN/TC 58 “Safety and control devices for burners and appliances burning gaseous or liquid fuels”
- CEN/TC 62 “Independent gas-fired space heaters”
- CEN/TC 69 “Industrial valves”
- CEN/TC 72 “Fire detection and fire alarm systems”
- CEN/TC 74 “Flanges and their joints”
- CEN/TC 106 “Large kitchen appliances using gaseous fuels”
- CEN/TC 109 “Central heating boilers using gaseous fuels”
- CEN/TC 121 “Welding and allied processes”
- CEN/TC 131 “Gas burners using fans”
- CEN/TC 144 “Tractors and machinery for agriculture and forestry”
- CEN/TC 151 “Construction equipment and building material machines – Safety”
- CEN/TC 155 “Plastics piping systems and ducting systems”
- CEN/TC 180 “Decentralized gas heating”
- CEN/TC 186 „Industrial thermoprocessing – Safety”
- CEN/TC 196 „Mining machinery and equipment – Safety”
- CEN/TC 197 „Pumps“
- CEN/TC 208 “Elastomeric seals for joints in pipework and pipelines”
- CEN/TC 218 “Rubber and plastics hoses and hose assemblies”
- CEN/TC 232 “Compressors, vacuum pumps and their systems”
- CEN/TC 234 “Gas infrastructure”
- CEN/TC 235 “Gas pressure regulators and associated safety devices for use in gas transmission and distribution”
- CEN/TC 236 “Non-industrial manually operated shut-off valves for gas and particular combinations valves-other products”
- CEN/TC 237 “Gas meters”



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## Involved Technical Committees (2)

- CEN/TC 238 “Test gases, test pressures, appliance categories and gas appliance types”
- CEN/TC 244 “Measurement of fluid flow in closed conduits”
- CEN/TC 256 “Railway applications”
- CEN/TC 262 “Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys”
- CEN/TC 264 “Air quality”
- CEN/TC 267 “Industrial piping and pipelines”
- CEN/TC 268 “Cryogenic vessels and specific hydrogen technologies applications”
- CEN/TC 269 “Shell and water tube boilers”
- CEN/TC 270 “Internal combustion engines”
- CEN/TC 274 “Aircraft ground support equipment”
- CEN/TC 282 “Installation and equipment for LNG”
- CEN/TC 286 “Liquefied petroleum gas equipment and accessories”
- CEN/TC 299 “Gas-fired sorption appliances, indirect fired sorption appliances, gas-fired endothermic engine heat pumps and domestic gas-fired washing and drying appliances”
- CEN/TC 301 “Road vehicles”
- CEN/TC 305 “Potentially explosive atmospheres - Explosion prevention and protection”
- CEN/TC 326 “Natural gas vehicles - Fueling and operation”
- CEN/TC 337 “Road operation equipment and products”
- CEN/TC 342 “Metal hoses, hose assemblies, bellows and expansion joints”
- CEN/TC 393 “Equipment for storage tanks and for filling stations”
- CEN/TC 399 “Gas Turbines applications – Safety”
- CEN/TC 408 “Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid”
- CEN/TC 459 “ECISS - European Committee for Iron and Steel Standardization”
- CLC/TC 8X “System aspects of electrical energy supply”
- CLC/TC 9X “Electrical and electronic applications for railways”
- CLC/TC 21X “Secondary cells and batteries”
- CLC/TC 31 “Electrical apparatus for potentially explosive atmospheres”
- CLC/TC 57 “Power systems management and associated information exchange”
- CLC/TC 216 “Gas detectors”

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# Current activities of the H<sub>2</sub> Coordination Group

- Review of the Standards Topic List (Annex to ECH<sub>2</sub>A Roadmap)
  - Completion of entries and further specification where necessary
  - Update of information (new projects, published standards etc.)
  - Identification of cross-cutting topics
  - Addition of further topics where necessary
  - Prioritisation of topics
- Update of the European hydrogen standardisation landscape
- Allocation of topics to be coordinated in clusters (hydrogen production, hydrogen network, industrial applications, transport and mobility, energy sector integration, building – residential applications)



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# Challenges in the H<sub>2</sub> Coordination Group work

- „Standardisability“ of topics – differentiation between regulation, certification and standardisation
- Handling of cross-cutting topics – responsibility and standardisability
- Pros and cons of clustering – easier manageability versus artificial boundaries

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# Next steps – Recommendations for action

Based on reviewed Standards Topic List:

## @ Standardization Committees



- Proposals for coordinating overlaps and closing gaps in standardisation
- Proposals for new projects
- Proposals for integration of pre-normative research results

## @ Standardization Organisations



- Proposals for creation of new technical committees
- Proposals for the allocation of work

## @ European Commission



- Input for standardization requests
- Proposals for pre-normative research activities

# Questions?

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