

Abstract

International interest in the use of hydrogen is expanding both from demand side pull and supply side push effects. These drivers apply also to Contracting Parties (CPs) in the Energy Community both regarding domestic applications and to capture opportunities from integrating with the new European hydrogen economy.

Hydrogen is expected to be a key contributor for delivering on the goals of the European Green Deal as evidenced through the European Commission's Hydrogen Strategy, which also foresees the promotion of cooperation with the Energy Community CPs. This provides the basis for international cooperation as well as potential financial support necessary to accelerate developments in the region.

National hydrogen strategies have also become increasingly prevalent as governments seek to provide focus and coherence to their policy framework. Strategies emphasise different objectives (domestic decarbonisation and renewable energy sources (RES) integration; transport; export) dependent on the context of the individual country. This will also be the case for CPs.

The different points of emphasis also reflect the range of hydrogen applications of interest. These include for long distance freight and bus travel, hydrogen used as a feedstock and in energy intensive industries, hydrogen for the storage of power, and in space heating. The economics of each are currently uncompetitive but expected to improve substantially with cost reductions in electrolyser manufacturing, access to low cost renewable energy and as commercialisation is achieved.

Which application could become sufficiently economic to be of interest in each CP depends on the local context, but a wide range of plausible applications are considered to be potentially viable in the long-term (2035-2050) at carbon prices of under €200/tCO₂ – a figure in line with international price forecasts for carbon in that period.

This presentation includes a stocktake and assessment of hydrogen developments and the readiness of each individual CP to integrate hydrogen into their energy system. This draws from interviews with national stakeholders together with information and data from public sources.