



PROJECTS AND ENERGY

National hydrogen strategy

The National Hydrogen Strategy (EN-H₂) was approved by the [Council of Ministers](#) on 21 May 2020. This [document](#) is available for [public consultation](#) from 22 May until 6 July 2020 and the purpose of this consultation is to have a period of listening to society and of close dialogue with the main players in the sector.

The approval of EN-H₂ comes against the background of the pursuit by the Portuguese Government of its objectives of **decarbonisation of the economy** and of **energy transition**. The main objective of EN-H₂ is the **gradual introduction of hydrogen into the energy sector and other sectors of the economy**. Therefore, the measures now proposed are intended to **boost the production, storage and consumption of hydrogen**.

Hydrogen is the most common chemical element in the universe and one of the most common on earth. **It is an element which, at room temperature, appears in a gaseous state and usually in the form of two hydrogen atoms. This why, as a rule, it is designated as H₂.**

However, although it exists on earth in great abundance, hydrogen almost always appears in combination with other chemical elements, such as oxygen or carbon. It is one of the components of water or methane. **As a result, the production of hydrogen requires the use of processes to separate it from the compounds in which it appears. In the case of green hydrogen, this is done with a process called water electrolysis exclusively using renewable energy.**

Hydrogen is a gas that carries a **high energy density** per unit of mass. This allows it to be a valid alternative solution for intensive industrial processes, where electricity is not a viable or effective alternative.

Hydrogen thus allows primary sources of renewable energy to penetrate into the production of gases and fuels, and not just into the production of electricity. **Even if not fully electrified, this opens the door to a fully decarbonised society and unlocks the full potential of renewable energies.**

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Hydrogen is a complement in the first phase and a potential alternative in the second phase, to natural gas and fossil fuel used in industrial processes and in transport. It also has the merit of making it possible to use and profit from existing infrastructures. At the same time, it creates strong synergies with the electricity sector by making it possible to store renewable electricity for longer periods.

SINES INDUSTRIAL PROJECT

The industrial project to produce green hydrogen in Sines is EN-H₂'s anchor project. The project has a planned base investment of over **€2.85 billion** and it provides for the construction of a solar plant to allow water electrolysis and thus produce hydrogen. **It also provides for the possibility of production on an industrial scale, with this unit's total capacity reaching 1 GW by 2030.**

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In this context, the recent [Order 6403-A/2020](#) was published by the [Government](#) on 17 June. In the Order, the Government decided to open up a period, until 17 July 2020, for Portuguese or European companies or other bodies to **express an interest in participating in the future Important Project of Common European Interest (IPCEI) on hydrogen**. The expression of interest is presented in a **pre-defined format** ("Project File"), available [here](#) and the **result** of the admission of projects must be concluded by 27 July 2020.

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The highlights of the financing for hydrogen projects are the **European Instruments** for funding with potential to support hydrogen projects, some of which are still under negotiation, and the **National Instruments** to support the decarbonisation of the economy and energy transition, which co-finance public and private projects.

In parallel, besides the financing mechanisms, which are important support instruments for new projects, EN-H₂ provides other **support mechanisms** to encourage new investment and these mechanisms are on various scales and in various sectors.

This teaser is simply intended to introduce EN-H₂ and some of its key ideas. For more detailed information, please click [here](#) to read our Informative Note. ■