



## FOCUS ON HYDROGEN: CURRENT REGULATORY FRAMEWORK FOR GREEN HYDROGEN IN SPAIN

Although green hydrogen production and use is still at an early stage of development and a European package is being put into place for hydrogen regulation (specifically, a proposal for a regulation and a proposal for a directive), Spain already has a *de lege lata* regulatory framework that enables green hydrogen to be produced, transported and supplied in Spain.

The main problem is that green hydrogen does not involve a single regulatory area; there are multiple regulatory areas to consider: (i) the production, transport and supply of renewable electricity, (ii) the availability of water, (iii) the production of green hydrogen, (iv) the storage of green hydrogen, (v) the transport of green hydrogen and (vi) the supply of green hydrogen. These activities also involve environmental factors that must be taken into consideration. In effect, then, and in anticipation of the new European legislation currently being developed, Spain already has a complex regulatory framework for green hydrogen.

### LEGALLY SPEAKING, WHAT IS RENEWABLE, OR GREEN, HYDROGEN?

According to article 2.22 of Royal Decree 376/2022, of 17 May, on sustainability criteria and the reduction of greenhouse gas emissions from biofuels, bioliquids and biomass fuels, as well as the system of guarantees of origin for renewable gases, renewable hydrogen consists of hydrogen from renewable sources.

For hydrogen to be considered renewable, its producer must be recorded in the register of production plants using gas from renewable sources, pursuant to article 19.1 of Royal Decree 376/2022, and must be able to redeem guarantees of origin for all the electricity used in the conversion process for hydrogen production, in accordance with the terms of Order TED/1026/2022, of 28 October, approving the procedure for the management of the system of guarantees of origin for gas from renewable sources.

In order for the electricity used in hydrogen production to be covered by guarantees of origin, it must come from wind, solar, aerothermal, geothermal, hydrothermal, waves, tides, hot and dry rocks, ocean thermal, ocean currents,

#### Key issues

- Green hydrogen is fuel that is still in the early stages of development.
- Spain already has a *de lege lata* regulatory framework that enables green hydrogen to be produced, transported and supplied in Spain, notwithstanding the European package for its regulation that is already in the works, consisting of a proposal for a regulation and a proposal for a directive.
- The multiple regulatory layers transcend a single sector.

hydropower, biomass, bioliquid, or biogas, pursuant to paragraph 2 (b) of Circular 1/2018, of 18 April, of the Spanish Markets and Competition Commission (CNMC), which governs the management of the system for guarantees of origin for electricity from renewable energy sources and high-efficiency co-generation.

## **HOW CAN RENEWABLE HYDROGEN PRODUCERS GET RENEWABLE POWER?**

By acquiring it as usual from a producer or supplier through the transport or distribution network or through a self-supply model, whether through the transport or distribution network or not. Of course, electricity will be much cheaper if it is self-supplied, although self-supply requires that land be available close to the electrolyser to install the power plant.

In any event, the necessary guarantees of origin must be obtained from the producer or distributor, if the owner of the renewable gas production plant is not also a producer of self-supplied electricity.

## **WHAT PERMITS ARE REQUIRED TO INSTALL A RENEWABLE POWER PLANT AND CONNECT IT TO ELECTROLYSERS PRODUCING THE GREEN HYDROGEN?**

In the absence of a contract with a producer or supplier for the ordinary supply of renewable power, renewable hydrogen producers must have a renewable power plant for self-supply and must comply with the proximity requirements of Royal Decree 244/2019.

Power plants that ordinarily allow self-supply (though not to the exclusion of others) are based on solar PV technology and require the following permits:

- Permit to access and connect to the electrical network if the electrolyser and the electricity production plant are not within the consumer's internal network or connected by a direct line. An electricity production plant will not require access and connection permits if its capacity is 15 kW or lower and it is located on urban land that has the facilities and services required by urban planning legislation.
- Prior administrative authorisation and administrative authorisation for construction, except for electricity production facilities of up to 500 kW. If a direct line is required (for self-supply), it will need these authorisations in any case.
- Start-up certificate.
- Administrative title for the occupation of land not eligible for development, if located on such land.
- Works licence and activity licence.

In addition, although not legally a permit, the environmental impact must be assessed in the case of solar PV plants occupying more than 10 hectares, except in the case of surplus-free self-supply or in the case of plants located in buildings or on urban land.

The exceptional regime for the processing of such facilities established temporarily by Royal Decree-Laws 6/2022 and 20/2022, in order to reduce the

complex administrative burden to obtain the permits, must be taken into account.

The location of the solar PV plant will require the availability of land, both for the plant and for the land through which the connection line to the electrolyser will pass, either by private agreement with its owner, by means of a title of occupation of public domain, or by obtaining a public utility declaration (which, however, cannot be used for direct lines).

It should be noted that Royal Decree-Law 18/2022 eliminated the ban on direct lines linking a producer and a consumer who are not part of the same business group in the case of renewable electricity power plants.

### **WHAT PERMITS ARE REQUIRED FOR THE INSTALLATION OF AN ELECTROLYSER FOR PRODUCING GREEN HYDROGEN?**

The production of green hydrogen consists of a chemical process by which water is broken down into hydrogen and oxygen through the consumption of renewable electricity.

From an environmental perspective, any facility that carries out chemical processes for hydrogen production on an industrial scale requires a comprehensive environmental authorisation from the autonomous region where the facility is located. The determination of what is understood as "industrial scale" manufacturing is decisive as to whether or not these facilities are exempted from the requirement for a comprehensive environmental authorisation.

It should be noted that the obligation to obtain a comprehensive environmental authorisation places the operator under the environmental liability regime of Act 26/2007 and the framework of mandatory financial guarantees established therein.

Renewable gas production plants do not require an administrative energy authorisation.

They must obtain the appropriate favourable environmental impact statement, as well as the relevant planning permission. The availability of land for the construction and operation of these facilities can only be obtained by private agreement with the landowner, as such land cannot be subject to a public utility declaration.

In addition, hydrogen production plants must have appropriate planning permission.

### **ARE THERE ALSO ADMINISTRATIVE REQUIREMENTS FOR THE STORAGE OF GREEN HYDROGEN BY RENEWABLE GAS PRODUCERS OR THEIR CUSTOMERS?**

Green hydrogen storage facilities must obtain a favourable environmental impact statement or report when the storage is underground, or when it is on the surface and occupies 50 or more hectares or has a capacity of 200,000 tons or more.

It should be noted that when at least five tons of hydrogen are stored, the measures to control the risks inherent in serious accidents involving hazardous substances under Spanish Royal Decree 840/2015 will apply.

The appropriate planning permission for the construction and operation of the storage facility must also be obtained.

No regulatory framework for the storage of renewable gases by green hydrogen transport or distribution operators exists at present, though the same environmental requirements as described above would apply, as well as, in case of underground storage, the mining regulations for the exploitation of underground structures, as Section B mining resources.

## **HOW CAN GREEN HYDROGEN PRODUCERS ACQUIRE WATER TO SUPPLY ELECTROLYSERS?**

A green hydrogen producer must obtain a concession from the appropriate water board (*confederación hidrográfica*) for the private exploitation of the hydraulic public domain, unless (i) it can use groundwater running on its land, with a maximum annual consumption of 7,000 cubic meters and with the specific limitations set out in the hydraulic public domain regulation, or (ii) if it requires very low industrial water consumption, it signs an agreement with the company supplying drinking water to the population.

## **WHAT RULES APPLY TO THE TRANSPORT OR DISTRIBUTION OF GREEN HYDROGEN?**

Royal Decree-Law 6/2022 provides that the legal regime for natural gas carriers, distributors, suppliers and consumers will apply to the supply of green hydrogen. This regulatory assimilation was already established for cases of mixed injection of renewable gases into the natural gas system. What is new is that legal assimilation will also occur when the supply of green hydrogen is made through dedicated hydrogen pipelines (called *hidroductos* in Spain) operated and maintained by a third party.

In short, green hydrogen network operators must obtain administrative authorisation and will be subject to the legal regime for carriers and distributors. Among other rules, this will involve the obligation to comply with the applicable limitations on unbundling and certification of transport network managers.

This assimilation has significant limitations:

- Depending on the maximum design pressure of the pipeline, the rules applicable to natural gas transporters and distributors will apply.
- Competence for authorising pipelines is vested in the autonomous community where it is located, unless it passes through several autonomous communities, in which case the Directorate General for Energy and Mining Policy under the Ministry for the Ecological Transition and the Demographic Challenge will be responsible for authorisation. In any case, a favourable report from the Directorate General for Energy and Mining Policy will be required, along with a non-binding report from the CNMC (the Spanish Energy Regulatory Authority) – except in the case of networks under state jurisdiction – for facilities with a maximum design pressure exceeding 16 bar. In addition, when the electrolyser is powered by the electrical grid, a favourable report must be obtained from the system operator.

- Access to green hydrogen networks is not regulated, nor is it based on access tolls approved by the CNMC, but rather is subject to agreement or negotiation, without prejudice to the CNMC's oversight authority. Accordingly, hydrogen pipelines are not assets remunerated under the system. These rules certainly factor into the financing regime for the construction of these assets.

From an environmental perspective, these pipelines will require a favourable environmental impact statement when the pipes have a diameter of more than 800 mm and a length of more than 40 km, or a favourable environmental impact report when they are located outside urban land and are longer than 10 km, all this, of course, in addition to the appropriate planning permission.

The assimilation of these pipelines into the natural gas network regime means that the owners of such networks may request a public utility declaration in relation to the land on which the pipes are to be placed. It also entails authorisation for such operators to deploy ancillary electronic communications networks.

## **WHO CAN ACCESS GREEN HYDROGEN NETWORKS?**

Although access to green hydrogen networks is negotiated, not regulated, those who can access natural gas networks are also entitled to request access to green hydrogen networks, subject to negotiation with their owner, under objective, transparent and non-discriminatory conditions, which may be subject to the CNMC's supervision.

This means that, as long as there is capacity in the green hydrogen network, other renewable gas producers and other consumers may request access for injection or consumption of green hydrogen in the network.

## **DOES FREEDOM OF CONTRACT EXIST FOR THE SUPPLY OF GREEN HYDROGEN?**

The supply of green hydrogen is also legally assimilated into the natural gas supply regime (with the relevant differences due to the different type of product being supplied) and is therefore subject to a simple notice. However, green hydrogen suppliers are not subject to the maintenance of minimum safety stock for the supply of renewable gases. Insofar as no special rule has been established, green hydrogen suppliers will also be obliged to comply with the measures for contributing to the National Energy Efficiency Fund (*Fondo Nacional de Eficiencia Energética*) under Act 18/2014.

However, there is no green hydrogen supply for vulnerable customers, unlike with the natural gas regime. For this reason, freedom of contract is far broader for green hydrogen supply agreements.

## **WHAT RIGHTS AND OBLIGATIONS DO GREEN HYDROGEN CONSUMERS HAVE?**

The rights and obligations of green hydrogen consumers are the same as those established for natural gas consumers.

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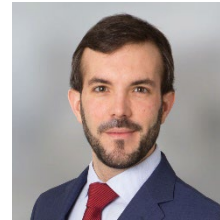
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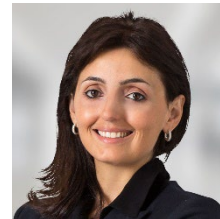
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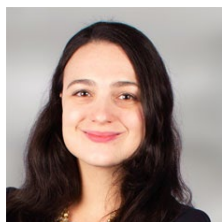


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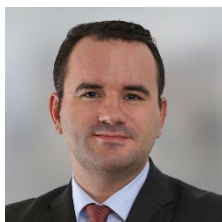
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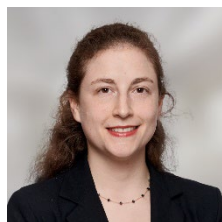
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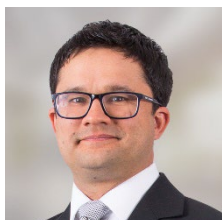
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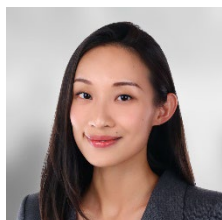
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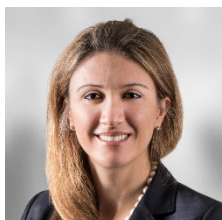
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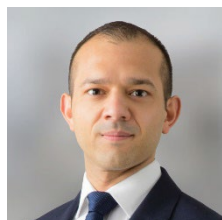
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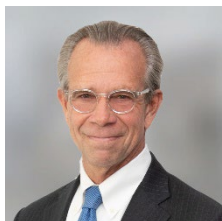
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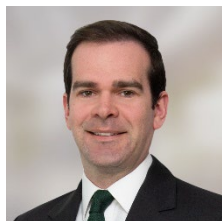
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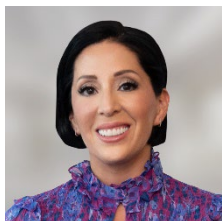
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