



FOCUS ON HYDROGEN: PORTUGAL'S CLEAN ENERGY PLAN GATHERS PACE

This summer the Portuguese Government approved its National Hydrogen Strategy, which aims to promote the gradual introduction of hydrogen as part of a more comprehensive transition strategy to a decarbonised economy. This briefing explores the key features of the strategy and notable developments in the Portuguese hydrogen market that have since gathered pace.

PORTUGAL'S NATIONAL HYDROGEN STRATEGY

On 30 July 2020, the Portuguese Government approved the National Hydrogen Strategy (*Estratégia Nacional para o Hidrogénio*, "EN-H2") proposed by the Council of Ministers. In broad terms, the EN-H2 recommends that Portugal focusses on the production and incorporation of renewable gases, with the emphasis on clean hydrogen, thus promoting the replacement of fossil fuels in sectors where electrification is not cost effective.

The EN-H2 has a further purpose, that of providing a framework and vision for all companies and sponsors with hydrogen projects in progress and encouraging synergies between promoters developing clean hydrogen strategies.

The Strategy should also be understood as a means of enabling the achievement of the goals and purposes already contained in the National Energy and Climate Plan 2021-2030 ("PNEC 2030"). It is envisaged that clean hydrogen will play a central role in reducing the costs of the PNEC 2030's proposed decarbonisation strategy, forming a fundamental vector for the decarbonisation of sectors such as industry and transport. This will enable higher levels of renewables penetration (already comparatively high in the European context) and accelerate the decarbonisation of the electricity sector itself.

OBJECTIVES FOR 2030

As part of its "ambitious but realistic" goals, the EN-H2 includes, among others, the following objectives for 2030:

- €7 to €9 billion in investment to develop a decarbonised hydrogen industry;
- €300 to €600 million reduction in natural gas imports;
- 10% to 15% of hydrogen injection in natural gas networks; and
- 2GW to 2.5GW of installed electrolyser capacity.

Key features

- National Hydrogen Strategy approved on 30 July 2020
- €7 to €9 billion in investment to develop a decarbonised hydrogen industry
- Target of 2GW to 2.5GW of installed electrolyser capacity by 2030
- Production of green hydrogen in Sines and other clean hydrogen projects reported to be underway
- Memorandum of understanding signed between the Portuguese and Dutch Governments on 23 September 2020

RELEVANT CLEAN HYDROGEN PROJECTS

The EN-H2 expressly assumes the introduction of hydrogen in the national energy system in an integrated, sustainable and optimized way and the subsequent development of a real hydrogen market in Portugal, comprising all segments of its value chain, from production to consumption, as one of its main purposes.

A central pillar to pursue this objective is the intended development of an anchor project in Sines to produce, process, store, transport and export hydrogen from renewable energy sources. A group of companies initially formed by EDP (electricity generator, distributor and supplier), Galp (vertically integrated oil and gas company and electricity and gas supplier), REN (Portuguese electricity transmission system operator), Martifer (metalworks company) and Vestas (wind turbine manufacturer) has already expressed its interest in the development of a project with those characteristics.

Other relevant projects in clean hydrogen which have been made public include:

- a project combining, among other activities, the production of green hydrogen with the production of green ammonia in Central Portugal, promoted by chemical company Bondalti;
- a project for the production of hydrogen fuel cells for mass transport, promoted by incumbent train operator CP and automobile distributor Salvador Caetano.

Portugal-Netherlands Memorandum for Green Hydrogen

A landmark development in Portugal's green hydrogen ambitions, in late September 2020 the Portuguese and Dutch Governments signed a memorandum of understanding "to affirm their intention to link the Hydrogen plans of Portugal and the Netherlands for 2030". In the memorandum, the parties expressed their intention to, among other things: (i) encourage the shipment of green hydrogen produced in Sines to the major Dutch port of Rotterdam (already poised to establish itself as a leading international hydrogen hub); and (ii) explore the possibility for Portugal and the Netherlands to jointly notify the European Commission under EU State aid rules, more specifically the application to promote an "Important Projects of Common European Interests" ("IPCEI"), as better detailed below.

According to a statement of the Portuguese Ministry of Environment and Climate Action ("MAAC"), the partnership with the Netherlands "reinforces the existing commitments in the National Hydrogen Strategy and the desire to promote an industrial policy based on public policies and strategies that can help to mobilise and guide public and private investment in hydrogen projects, thus creating opportunities for companies and industry".

A EUROPEAN APPROACH

One of the intentions of the Portuguese Government pursuant to EN-H2 is to prepare the participation of Portugal in an IPCEI application for the clean hydrogen sector, as has been publicly announced by the European Commission. In this regard, the Government has launched a procedure to identify projects that could be considered for this purpose. It is expected that, in the near future, further steps will be taken towards the preparation and submission of this IPCEI application. On 17 June 2020, Ordinance no. 6403-A/2020 was enacted, which opened a period for expressions of interest related to clean hydrogen projects, in order to "strengthen" a Portuguese application

“We want .. to deliver a set of projects that can encompass more elements of the hydrogen value chain to produce, store, transport, use and export green hydrogen on an industrial scale.”

João Galamba
Secretary of State for Energy

“Portugal has favourable and competitive conditions for the production of hydrogen.”

Kadri Simson
European Commissioner for Energy

for IPCEI in the clean hydrogen space. The deadline to present the relevant applications was 17 July 2020.

Pursuant to such procedure, 37 projects were selected, with an estimated investment of over €9 billion (which include those mentioned in the “relevant clean hydrogen projects” section).

NEXT STEPS

Future Legal Framework

In July 2020, the first steps were taken towards regulating the production and injection in natural gas transmission networks of gases with renewable origin (including hydrogen) by the enactment of Decree-Law no. 62/2020, of 9 July (approving the National System for Natural Gas). Nevertheless, such legislative innovations have yet to be regulated.

Development of the Portuguese Clean Hydrogen Market

In the development of the clean hydrogen market, the Portuguese Government is intent on, among other things:

- initiating dialogue with the main stakeholders in key sectors (energy, transport and industry) with the aim to establish the goals for incorporating clean hydrogen in these various sectors;
- preparing the submission of the IPCEI application on the basis of EN-H2 (including the clean hydro projects presented pursuant to the invitation for expressions of interest under Ordinance no. 6403-A/2020);
- continuing dialogue with European and international partners in the field of hydrogen, including the Netherlands, Germany, Japan and Canada; and
- facilitating the implementation of hydrogen collaborative laboratories (“CoLABs”), nascent research entities funded by public higher education and companies in the private sector that have been involved in furthering research into clean hydrogen.

CONTACTS

Morais Leitão



André de Sousa Vieira
Partner

T +351 912 143 124
E andre.desousavieira
@mlgts.pt



Ricardo Andrade Amaro
Partner

T +351 213 817 423
E ramaro
@mlgts.pt



Vítor Pereira das Neves
Partner

T +351 213 826 613
E vpneves
@mlgts.pt



Claudia Santos Cruz
Consultant

T +351 213 817 430
E cscruz
@mlgts.pt



Elmano Sousa Costa
Managing Associate

T +351 213 826 601
E elmanocosta
@mlgts.pt



Pedro Capitão Barbosa
Associate

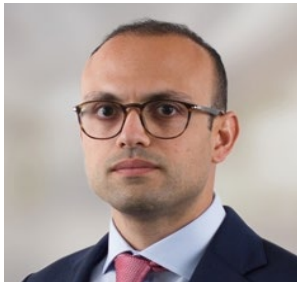
T +351 213 817 423
E pccbarbosa
@mlgts.com

Clifford Chance



Anthony Giustini
Partner

T +33 (0)1 44 05 59 26
E anthony.giustini
@cliffordchance.com



Andreas Formosa
Senior Associate

T +44 20 7006 4421
E andreas.formosa
@cliffordchance.com



Clara Alcaraz
Senior Associate

T +34 91 590 9498
E clara.alcaraz
@cliffordchance.com

This publication does not necessarily deal with every important topic or cover every aspect of the topics with which it deals. It is not designed to provide legal or other advice.

www.cliffordchance.com

Clifford Chance, 10 Upper Bank Street,
London, E14 5JJ

© Clifford Chance 2020

Clifford Chance LLP is a limited liability partnership registered in England and Wales under number OC323571

Registered office: 10 Upper Bank Street,
London, E14 5JJ

We use the word 'partner' to refer to a member of Clifford Chance LLP, or an employee or consultant with equivalent standing and qualifications

If you do not wish to receive further information from Clifford Chance about events or legal developments which we believe may be of interest to you, please either send an email to nomorecontact@cliffordchance.com or by post at Clifford Chance LLP, 10 Upper Bank Street, Canary Wharf, London E14 5JJ

Abu Dhabi • Amsterdam • Barcelona • Beijing • Brussels • Bucharest • Casablanca • Dubai • Düsseldorf • Frankfurt • Hong Kong • Istanbul • London • Luxembourg • Madrid • Milan • Moscow • Munich • Newcastle • New York • Paris • Perth • Prague • Rome • São Paulo • Seoul • Shanghai • Singapore • Sydney • Tokyo • Warsaw • Washington, D.C.

Clifford Chance has a co-operation agreement with Abuhimed Alsheikh Alhagbani Law Firm in Riyadh.

Clifford Chance has a best friends relationship with Redcliffe Partners in Ukraine.

Clifford Chance



William Adams
Associate

T +44 20 7006 2001
E william.adams
@cliffordchance.com



Courtney Hoffman
Business Development

T +44 20 7006 4787
E courtney.hoffman
@cliffordchance.com

ABOUT

Focus on Hydrogen is a Clifford Chance briefing series covering hydrogen-related developments globally. 1.008 is the standard atomic mass of hydrogen. For other hydrogen publications, please see our thought leadership page [here](#).

For this briefing we partnered with Morais Leitão, a leading firm which has been involved in the most complex and large-scale energy and infrastructure deals in Portugal and Lusophone Africa. For more information, please visit their website [here](#).