

Intervenção do Secretário de Estado Adjunto e da Energia, João Galamba

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The European Green Deal: From Vision to Implementation / EU Energy Day: Hydrogen to drive the EU's green transition

Good morning,

Let me start by thanking European Union and EU-GCC Clean Energy Technology Network for the invitation and congratulate on the work developed and organization in the framework of Expo 2020.

As a member of the Portuguese Government, I am truly honoured to address those present here today for the EU Energy Day, to share Portuguese vision regarding the opportunities arising from the necessary energy transition, particularly on what concerns the role of renewable hydrogen in the decarbonization strategy and European Green Deal.

The challenges our society faces require concerted action in energy and climate. And as new challenges emerge, new solutions and opportunities must be found.

Hydrogen, particularly green hydrogen, is a crucial facilitator to achieve the objectives of the Green Deal, contributing to the pursuit of decarbonization, as an energy carrier and for long term storage, especially on those sectors where electrification is not feasible or not cost-effective. Considering the events of the last few months it's clear that green hydrogen is cheaper than the others (types/ ex. Blue hydrogen). In Portugal it is cheaper.

Important sectors where hydrogen can play a role, includes:

- Aviation sector, chemical industry and transportation - mainly in bus and public transportation, heavy duty and long-distance transportation. Indeed, Hydrogen or related products (ammonia and methanol) are also critical to decarbonize the maritime sector transportation.

To achieve its full potential, it is very important to make progress and take the next steps to make its price competitive and create a real market, while maintaining investment in research and innovation, to develop the necessary infrastructures and implement measures of certification of origin. Creation of international standards for Hydrogen international trade is an area where a common playing field must be achieved.

So, where does Portugal stand, considering these developments?

Portugal was the first country in the world to commit to carbon neutrality by 2050. The Portuguese government is promoting an industrial policy around green hydrogen, which is based on the definition of a set of public policies that guide, coordinate and mobilize public and private investment in projects in the areas of production, storage, transport and consumption of renewable gases.

A small and peripheric country from southern Europe, like Portugal, can be a key element to push forward the broad use of green hydrogen and contribute to a genuine international hydrogen market. We have the right resources, very competitive conditions both for solar and wind (onshore and offshore), and a strategic geographical location that facilitates exports to the main consumption site and international market.

We are focused on five fundamental aspects of building a hydrogen market, for a positive contribution of **Portugal** as an example for Europe's energy system soon: Strategy, Implementation, Financing, sustained investments in our R&D and International cooperation.

Accelerating the energy transition and the decarbonisation of the economy over the next decade means that we must invest in the production and incorporation of renewable gases, with a focus on green hydrogen, thus promoting faster substitution of fossil fuels.

We are front-runners on energy transition, with a robust track record on renewables, and we have a full range of policies and instruments to achieve this goal.

There are necessary conditions that need to be in place and Portugal has already carried out several relevant actions to a solid framework to the development of the Hydrogen economy:

- At national level, legislative act is ready, as well as the Regulatory framework that gives the investors and lenders a predictability on how to address, measure and mitigate policy and country risks;
- We have the same Regulator for power and gas system and the same TSO for both systems, which allow us to take an integrated approach;
- On the next investment plan for the TSO we want to cover the needs of grid development for the hydrogen clusters and necessary infrastructures adaptation for green methanol and green ammonia;
- We also have in public consultation the new power law, that considers electrolyzers as batteries on the tariff system;
- Stable support and incentive mechanisms to allow volume and price risk mitigation as well as subsidize economic affordability in the initial stages of the implementation;
- As evidenced in our National Hydrogen Strategy, approved after a public consultation period, we have an ambitious, aggregating and mobilizing strategy fully aligned with the European ambition.

Our Strategy established the goals to be met by 2030, namely up to 15% of green hydrogen injected into natural gas networks, between 50 to 100 hydrogen refueling stations, at least 2,5 GW of production capacity resulting in 7 to 9 billion euros of investment, up to 740 million euros reduction in imports of Natural Gas and 180 million euros reduction in ammonia imports.

On Competitiveness, trends are particularly on costs reduction, (namely, reducing costs of electricity, and reducing costs of electrolysers, where scaling up projects are key to achieve these results).

It is critical to stimulate research, innovation and knowledge, so that we can disseminate *clean/ low-carbon* technologies and scale-up investments on innovative solutions, that better respond to our needs.

To give the correct signals to producers but also to consumers, new support mechanisms will be envisaged and implemented in Portugal- that encourage investment and integration of hydrogen in the national energy system and that should have in their basis of design the advantages, energetic, economic and environmental that the hydrogen provides to the system.

In this sense, it is important to create mechanisms that make it possible to reconcile two objectives: (i) making investments in hydrogen production feasible in the start-up phase and promote the beginning of the incorporation of hydrogen in the energy system, adequately remunerating production, at the same time that (ii) avoids that these objectives represent a cost for the energy system, which could compromise the consumers adherence to the Strategy. This will translate into the launch of a tender that will take place during the second half of 2021. This will be an opex support mechanism, a form of carbon CFD, that support end users.

Also important is the idea of developing hydrogen valleys or clusters.

Valleys are integrated ecosystems that allow the integrated and systematic deployment of several hydrogen related elements of the value chain. They allow to closely integrate production, distribution and the many possible usages. This integrated approach favours collective efficiency, lowers costs, and quick deployment, one of the objectives of the EU. There are many valleys across Europe and across the world. Portugal also plans to develop 2 valleys- Sines and North of Portugal.

Sines - the biggest sea-port in Europe's West coast, in the southern Portugal, connected to an industrial park, with a strategic location and Portugal's energy hub. The significant

presence of a refining, petrochemical and chemical cluster inspires the optimal ecosystem of green Hydrogen and other renewable gases, aiming at securing synchronized value chain for production, transportation and demand, focused on leveraging Portugal's renewable energy as factor of competitiveness for international trade. Hydrogen economy, through collaboration involving industry and governments that will allow the industrial scale up of green hydrogen.

- Creating the conditions for long distance transport and trade of green hydrogen, Green Ammonia and methanol, as well the financial support mechanisms to kickstart this critical element of a functioning hydrogen economy, Portugal can commit to more ambitious production, contributing to world demand. Strengthen international partnerships and cooperation are key role to answer the challenges, to scale up to hydrogen market, costs reduction and reinforce the learning curves in each country.

These are historical times in the energy sector.

More than agents acting in a market, we need a collective focus and drive to accelerate the implementation of a renewable hydrogen market, create a full hydrogen value chain and ensure a global industrial and technological leadership, aligned with climate objectives and EU Green Deal.

Thank you.