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PRESS RELEASE

URBAN ECOLOGY: DIJON MÉTROPOLE LAUNCHES THE CREATION OF A HYDROGEN PRODUCTION AND DISTRIBUTION UNIT IN A 'SHORT CIRCUIT'

Dijon, a finalist in the "2022 Green European capital" competition which has been awarded the "Cit'ergie" label, is developing green mobility by increasing the use of renewable energies within the metropolitan area. The local authority has launched the creation of a unit for the production of hydrogen by electrolysis using "green" electricity generated by a household waste incineration plant. The aim is to power a fleet of clean vehicles – essential for the energy and carbon-free transition. The government – via the ADEME (the French Agency for the Environment and Energy Management) – is helping to finance the project, together with the Bourgogne-Franche-Comté region.

The launch of the Dijon Métropole's hydrogen production and distribution unit is the latest in a series of initiatives in favour of soft mobility and urban ecology. Other initiatives include the development of soft modes of transport (a tram network, hybrid buses and bicycles), pedestrianised areas and a municipal heating network and projects to preserve biodiversity and pollinating insects.

Hydrogen combines all the assets to meet the challenge of the energy transition. It emits only water and generates no noise, no greenhouse gases and no particles. Consequently, Dijon Métropole has come up with a short-circuit system for the local production of hydrogen from renewable sources. The gas will be produced through the electrolysis of water at a plant that will be built close to the city's waste incineration plant. It will mainly be produced using "green" electricity derived from the waste incineration plant's turbine-generator unit with supplementary needs provided by the photovoltaic solar farm or other locally-produced renewable electricity sources.

The electrolyser will initially supply 500 kg of hydrogen per day. It will power the fuel cells of the hydrogen electric vehicles making up the city's fleet of eight household refuse collectors and six light utility vehicles; the aim is to use this technology in buses the next time the fleet is replaced. Ultimately, the plant will provide the means to charge all types of hydrogen electric vehicles across the region for both companies and individuals.

The creation of this plant is being managed by Dijon Métropole and Rougeot Energie within the framework of Dijon Métropole Smart Energy (DMSE), a limited company. Created in application of the provisions of article L.2253-1 of France's labour code, the local authority and Rougeot Energie have formed a limited company in order to produce and supply

renewable energy using facilities located across the urban area. DMSE will work alongside Keolis, a company involved in developing shared mobility solutions that is committed to the energy transition, and Hynamics, a subsidiary of the EDF group. The Bourgogne-Franche-Comté region has adopted an ambitious hydrogen plan which establishes production and distribution of the gas as a priority for successfully implementing the vital energy transition. As such, it will support the creation of Dijon Métropole's production, distribution and storage plant.

DIJON MÉTROPOLE SMART ENERGHY: SOME FIGURES

In 2019, Dijon Métropole was one of eleven winners of the “Ecosystems and hydrogen mobility” call for projects, launched by the ADEME. The plant's overall cost is an estimated **€6.5 million**.

The project has been certified by the ADEME which will put up **€1.8 million** to install the infrastructure and **€1.6 million** for the vehicles.

Dijon Métropole will acquire **eight household refuse collectors**.

The production plant is scheduled to enter service in **summer 2021**.

In 2022: 1,750 tonnes of CO² will be saved per year – equivalent to 700 return trips from Paris to New York

500 kg of hydrogen will be produced per day

Rapid charging times

- Heavy vehicles: between **10** and **15 minutes**
- Light vehicles: between **3** and **5 minutes**

Long operational range

- Household refuse collectors: **350 km**
- Light vehicles: between **300** and **650 km**

Competitive energy: **1 kg of hydrogen = 100 km** for a light vehicle

A household refuse collector uses **20 kg of hydrogen/day** for its rounds

ABOUT

HUBERT ROUGEOT MEURSAULT is an independent Burgundy-based company that employs 580 people. It has been supporting its public and private clients for 60 years in the field of public works. Originally specialised in building projects for the wine-producing sector, it became a general road-building company in 1970 and then expanded its expertise to include construction. Alongside the Public Works and Construction divisions, Christophe Rougeot is keen to establish the Group as a company focused on the future and the energy transition, while ensuring the continuation of the family ethos. JUSTY was founded in 2017 in Dijon to provide engineering services and training in the field of renewable energies (wind power, hydrogen, etc.). Its role is to support its clients, particularly those representing the region, in conducting analyses, defining and assessing the technical feasibility of H2 projects, developing its economic model and managing calls for projects. In 2019, the Group shored up its commitment by creating the ROUGEOT ENERGIE division for a more sustainable future made possible by the industrial hydrogen sector. The division's aim is to create and link up future regions by making innovative and sustainable infrastructure and energy available to people and local authorities.

To do this, ROUGEOT ENERGIE develops turnkey H2 projects – from design to implementation – such as Dijon Métropole Smart Energy and ISTHY.

KEOLIS

Leading the way in public transport, Keolis partners with public decision-makers to make shared mobility an asset for cities and their communities. Internationally recognised as the leading operator of trams and automated metros, Keolis adopts an innovative approach with all its partners and subsidiaries (Kisio, EFFIA, Keolis Santé and Cykleo) to develop new forms of shared and customised mobility, and reinforce its core business across a range of transport modes including trains, buses, coaches, trolleybuses, river shuttles, ferries, cycles, car sharing services, electric autonomous vehicles and urban cable cars. In France, Keolis is now the leader in medical transport services through the creation of Keolis Santé in July 2017 and positioned as the number two car park operator, through its subsidiary EFFIA. The company is 70% owned by the SNCF and 30% by the Caisse de dépôt et placement du Québec (CDPQ). Keolis employs 65,000 people in 15 countries* and recorded revenue of 5.9 billion euros in 2018. Each year, over 3.3 billion passengers worldwide use one of the shared mobility services offered by Keolis. www.keolis.com

*Historically based in France, Keolis has expanded its operations in Australia, Belgium, Canada, China, Denmark, Germany, India, Norway, the Netherlands, Qatar, Senegal, Sweden, the UK and the USA.

The EDF Group launched its dedicated hydrogen subsidiary in early 2017. Its aim is to become a major player in the hydrogen sector both in France and at international level, and to shore up its role in tackling climate change for a low-carbon world. **Hynamics** uses electrolysis of water to produce its hydrogen – a technology that does not emit any CO₂ – provided that the electricity used is itself generated by renewable and/or low-carbon reduction means. Hynamics is targeting the two highest CO₂-producing sectors: industry and mobility. By investing in hydrogen production and distribution facilities and then operating and maintaining these facilities, Hynamics supports its clients in their decarbonisation initiatives and offers them turnkey solutions.

The Bourgogne-Franche-Comté region is proud of its hydrogen sector and is actively committed to developing it. The Region is using the ecological and climate transition as the backbone of its roadmap and, more recently, the basis for its 2020 budget. Its aim is to become a positive-energy region. In order to speed up the transition and reduce greenhouse gas emissions, it is actively supporting technological innovation in clean forms of mobility and is investing in promising industrial sectors, as well as in renewable energies and means for storing them. Of all the alternatives to fossil energies, hydrogen is one of the main energy vectors of the future. The Bourgogne-Franche-Comté region has a well-established, mature and recognised hydrogen sector (the region received certification back in 2016 as part of the nationwide “Territoires Hydrogène” calls for projects), a robust ecosystem and a dynamic industrial fabric (such as the Faurecia installation project, the world hydrogen reservoir prototype research and development centre in Bavans, western France, in which the regional authority has invested nearly €5 million), structural facilities (the FCLAB platform in Belfort, etc.) and pioneering territories with major projects, such as the City of Dijon's project (which is concentrating on household refuse collectors, buses and utility vehicles powered by green hydrogen produced locally from household waste burnt at the city's waste incineration plant). The Region wants to become a leader in using hydrogen as a vector in the energy transition. It has therefore decided to amplify the dynamics of structuring this sector by voting, in November 2019, on the regional roadmap dedicated to hydrogen for the next ten years. The objective is not only to support the development of stationary and mobility uses, such as the acquisition of a first fleet of hydrogen trains, but also to invest in research, awareness and training. This regional effort represents more than €100 million to support the growth and deployment of the sector.