

Press release



FACT SHEET

Port of Antwerp brings different players together to produce sustainable methanol

Learn more about the different partners



About Antwerp Port Authority

As Europe's second-largest port, the Port of Antwerp is a major lifeline for the Belgian economy: more than 300 line services to over 800 destinations ensure global connectivity. The Port of Antwerp annually handles around 235 million tonnes of international maritime freight, and is home to Europe's largest integrated (petro)chemical cluster. The Port of Antwerp accounts, directly and indirectly, for a total of around 143,000 jobs and more than €20 billion added value.

True to its mission 'a home port vital for a sustainable future', Antwerp Port Authority aims to flexibly respond to a rapidly evolving maritime market, allowing the port to continue playing its role as a leading world port. The emphasis in this respect is on cooperation, adaptability, a strong focus on innovation and digitisation, and on sustainable added value, as well as on responsibility towards society.

Antwerp Port Authority is a limited liability company of public law, with the City of Antwerp as sole shareholder. It employs over 1,500 people. Port alderman Annick De Ridder is chairman of the Board of Directors and Jacques Vandermeiren is CEO and President of the Executive Committee, which is responsible for the day-to-day management. www.portofantwerp.com



About Indaver

Indaver operates specialist facilities and smart systems for waste management, processing around 5 million tonnes of waste annually for industry, government departments and householders.

Indaver creates value from this waste by recovering materials and energy, thus playing an essential role in the circular economy. The company seeks to close the material

circuits in a safe, energy-efficient and low-CO₂ way. As such the Power-to-Methanol concept fits in fully with Indaver's sustainability strategy. The CO₂ from thermal processing of waste will be recovered and used as a raw material for producing methanol. Indaver will contribute its know-how in carbon capture and utilisation for this project. It has also offered to build a first demonstration unit on its site in the Left bank area of the port.

Headquartered in Belgium, Indaver has 31 operational sites in Europe, employing 1662 people in Belgium, Germany, Ireland, the Netherlands, the UK, France, Italy, Spain and Portugal.

www.indaver.be

Perscontact

Inge Baertsoen

Communications Manager

+32 497 970570

inge.baertsoen@Indaver.be

Oiltanking

Oil tanking is a world-class player in tank storage. With two terminals in the port of Antwerp it is one of the largest and most diversified players in handling and storage of gases, chemicals and mineral oils.

In the port of Antwerp it has hosted the largest methanol hub in the region for several years now.

As an experienced logistics partner Oiltanking is an important partner in this project for CO₂, hydrogen and methanol.

www.oiltanking.com



Vlaamse Milieuholding NV (VMH) is a government-owned investment company that acquires stakes in companies in the waste industry that are considered strategic by the Flemish government. It provides risk capital for companies at an early stage of development that speed up the transition to the circular economy.

In this way it promotes the development of new, innovative initiatives with a favourable impact on the environment, including start-ups and companies at an early stage of development.

VMH can take a minority stake in rounds of capital-raising of between 200,000 and 3,000,000 euros.

www.vmh.be



Helm Proman Methanol AG is proud to be chosen as partner of preference to participate in this project "Power to Methanol" to produce and market renewable Methanol. With

more than 6 Million Metric Tons of annual Methanol sales globally and our expertise of marketing the product for over 50 years we are sure to contribute effectively to the project. Helm Proman Methanol AG is based in Switzerland close to our JV partner Proman AG. With offices in Houston and Singapore and a vast global network of commercial affiliates of Helm AG Hamburg, our majority shareholder, we do have a lot of acquired expertise in this market segment. The Methanol we supply is produced mainly in our world-scale plants in Trinidad, USA and Oman. We believe in the future energy transition and are convinced that the product and especially renewable Methanol will play an important role in this.

www.helmaq.com



ENGIE, leader in the carbon-free transition and partner in Power-to-Methanol

A collaboration agreement for the Power-to-Methanol project was signed on 21 March 2019 by ENGIE, Oiltanking, Indaver, VMH and Port of Antwerp. This project demonstrates that methanol can also be produced in a sustainable way. Methanol is an important raw material for the chemical industry and can also be used as fuel both for shipping and for road transport. Methanol is currently obtained from fossil fuels, but with this technology it can be produced in a sustainable way from hydrogen and waste CO₂. This project, in which ENGIE is making a significant contribution, fits in perfectly with the ambition of the ENGIE Group to become a leader in the carbon-free transition.

Hydrogen: the missing link for a low-carbon ecosystem

Sustainable or "green" methanol is produced using hydrogen, which is *the* fuel of the future. Hydrogen offers many possibilities for making industrial processes carbon-free. With the Power-to-Methanol project, in which ENGIE is one of the partners, hydrogen can be used for sustainable production of methanol. Hydrogen is obtained by electrolysis¹ which in turn can make use of surplus electricity from renewable solar and wind power generation. This is particularly important because with the expansion of renewable power sources there is increasingly liable to be surplus power production at certain times. Since renewable energy tends to be intermittent, and because electricity cannot be stored directly, using it to generate hydrogen which can indeed be stored helps to assure the stability and efficient operation of the network.

According to ENGIE this makes hydrogen the essential missing link in a low-carbon ecosystem. As a leader in the energy transition ENGIE intends to pursue this technology vigorously and so become a major player in the hydrogen sector. In addition to Power-to-Methanol ENGIE is working on various other projects for production of hydrogen, for use as transport fuel among other applications. In this way the company can contribute towards harmonious progress for cities, regions and indeed the whole of society all over the world.

Circular use of carbon

The second component for production of sustainable methanol is waste CO₂. With this technology CO₂ is first collected from flue gases and then purified before being combined with hydrogen, thus avoiding a significant amount of CO₂ emissions. This process, known as "carbon capture and utilisation" or CCU, is a way of using carbon in a circular manner.

¹ A process in which hydrogen and oxygen are released when electricity is passed through water.

Thus less new fossil fuels have to be taken out of the ground, and less CO₂ is emitted into the atmosphere. Power-to-Methanol is therefore a further step towards a carbon-free economy and a more sustainable society. As such the project fits in perfectly with ENGIE's ambition to be a leader in the carbon-free transition.

First step towards storage

Finally this project can also be an important first step towards seasonal storage of intermittent wind and solar energy. With the further development of renewable energy we will increasingly be confronted with the need to store the energy being produced. Because of its physical properties methanol can play an important role in this power-to-gas or power-to-liquid scenario.

ENGIE as an important partner of Power-to-Methanol

Power-to-Methanol is a type project which demands collaboration between important sectors, namely electricity, chemicals and fuels. This means that know-how from all these sectors has to be combined in order to ensure a successful outcome. ENGIE has an important contribution to make to this project, both as the country's largest green electricity producer and as a socially responsible company. Together with the other partners ENGIE will work on perfecting the technology in the course of this year, ensuring regulatory compliance of the project and covering the logistical aspects (supply of raw materials and finding markets for the methanol that is produced). The intention is to arrive at a final investment decision in the autumn of 2019.

Philip Pouillie, CEO of ENGIE Generation Benelux, explains: *"The collaboration agreement that we have signed for the Power-to-Methanol project is an important step forwards in the energy transition. As the largest producer of green electricity in Belgium and as the leader in the carbon-free transition, ENGIE is making an important contribution to this project. The ENGIE teams can draw upon not only their knowledge of the electricity market but also their technical know-how in electrolysis and CO₂ capture."*

www.engie-electrabel.be

Perscontact

Hellen Smeets

hellen.smeets@engie.com

02 519 51 69