



XYLOWATT has just delivered its first biomass gasification plant in France to the GDF SUEZ centre for research and innovation. This solution will in the long run feed a Saint-Gobain Emballage glass furnace in the Champagne region. Aim: reducing CO₂ emissions by 10,000 tonnes per year, i.e. the equivalent to the amount of CO₂ produced by approximately 5,000 vehicles!

As a leading Belgian and European actor in renewable energy, **XYLOWATT is placing its technological innovation at the service of four major French partners:**

Saint-Gobain Emballage (packaging division), GDF SUEZ, the Centre de Coopération internationale pour la recherche Agronomique et le Développement (CIRAD - Agricultural Research Centre for International Development) and the Comité interprofessionnel du Vin de Champagne (CIVC - Wine of Champagne Committee).

Within this context, XYLOWATT has just delivered **its very first gasification plant in France**. On the 3rd of May, a lorry carried an exceptional load from the Marchienne-au-Pont factory (Charleroi, Belgium) to Saint-Denis (Paris, France). The gasification reactor was installed by the XYLOWATT team at the **GDF SUEZ** Centre for Research and Innovation - Gas and New Energies. It will take part in a series of tests on a semi-industrial combustion cell (representing a glass furnace) before being commissioned on the **Saint-Gobain Emballage** hollow glass production site in Oiry (Epernay, France), where champagne bottles are manufactured. For this purpose, XYLOWATT has adapted its NOTAR® reactor so as to better fulfil the specifications required by an application with glass furnaces.

This is both the **fourth** plant fitted with **NOTAR®** technology, patented by XYLOWATT and marketed by the Charleroi Company and its **second** plant shipped abroad, following that of Pollington in England last April.

BioViVe Project: the vine as an energy generator!

Saint-Gobain Emballage, which markets its products under the Verallia brand name, GDF SUEZ, XYLOWATT, the CIRAD and the CIVC have come together with the BioViVe project **to accelerate the substitution of fossil energy with renewable energy generated from viticulture.**

The BioViVe project (Biomass Viticole pour la fusion du Verre - Viticultural Biomass for Glass Fusion) is a Research and Development project, the purpose of which is the direct use, within a glass furnace, of a synthesis gas obtained by the gasification of ligneous by-products originating from the trimming and picking of vines. This synthesis gas will substitute the fossil energies currently used.

The vineyard in the Champagne region of France has currently untransformed biomass resources such as wood cuttings burnt on the land or picked vine stocks. Based on existing technology for the gasification of wood produced from timber operations, the BioViVe project consists in adapting this gasification process to the characteristics of vine wood and in optimising the synthesis gas obtained for use in a glass furnace. **Therefore, the vine producing wine from the Champagne region of France, will also serve to generate a part of the energy required to manufacture the bottles in which this wine will be sold.**

In parallel to the research conducted on synthesis gas, the partners are looking to create a biomass collection line, both sustainable and local, mobilising the Champagne wine growers.

At the end of this Research and Development project, the BioViVe partners hope to have tested a substitution rate of approximately 7 % of the fuel feeding the glass furnace in Oiry in the Champagne region and to have acquired the knowledge necessary to consider the development of the line for substitution rates reaching up to 50 %.

If successful, the BioViVe project will reduce **CO₂ emissions by 10,000 tonnes per year** in its industrial phase, **i.e. the equivalent to the amount of CO₂ produced by approximately 5,000 vehicles.**

The BioViVe project represents a global investment of **4.8 million Euros**. It is supported by the Agence Nationale de la Recherche française (French National Research Agency) and has received labels from the IAR (Champagne Ardennes - Picardy) and DERBI (Languedoc Roussillon) competitive clusters.

The French partners chose the Belgian cogeneration company XYLOWATT for several reasons:

- The exclusive gasification technology, NOTAR®, patented by XYLOWATT is a fixed bed technology **better suited to an application with glass furnaces than competing technologies**, in particular in terms of power.

Indeed, the 1 MW power of the reactor delivered is particularly suited to preliminary testing, followed if successful by an industrial roll-out with more powerful reactors.

- A piece of equipment already on the market **with proven efficiency**.
- References in industrial operation applied to cogeneration.

Partners

XYLOWATT, a unique know-how and state of the art technology

The Charleroi Company, specialised in biomass gasification, develops and markets wood gasification cogeneration plants. Within the latter, the wood is transformed into a gas, which is burnt in cogeneration units, thus producing electricity and heat. The wood, a source of renewable energy, is converted into electricity and heat thanks to the exclusive gasification technology, NOTAR®, developed by XYLOWATT.

XYLOWATT is an internationally renowned company working in the field of small-scale biomass cogeneration, whose knowledge-base and technology is unique in Europe. It has broken through a technological lock-in, which in the years to come will lead to gasification undergoing a **similar** growth rate to that already experienced by wind farming throughout the world.

In a few words

- A spin-off from the Catholic University of Louvain (U.C.L.), founded in 2001 after 20 years of research,
- One of the Belgian technological leaders in renewable energy.
- The industrial innovation company set up in Marchienne-au-Pont (Charleroi - Belgium), counts 35 employees.

SAINT GOBAIN EMBALLAGE

A French company of the Saint-Gobain Conditionnement Centre, currently baptised **Verallia**.

As the number 2 international actor on its market, Verallia designs and manufactures glass packaging which is both environmentally friendly and infinitely recyclable, which transforms the contents, and preserves both the food quality and the well-being of consumers. In 2010, Verallia produced almost 25 billion bottles and pots. Its activity is deployed over a commercial network

enabling it to serve nearly 10,000 customers throughout the world. The company invests in sustainable development and innovation.

GDF SUEZ

GDF SUEZ integrates responsible growth into the very heart of its professions so as to overcome its major energy and environmental challenges: meet its energy needs, ensure continued provisions, fight against climate change and optimise the use of resources. The Group offers high performance, innovative solutions to individuals, towns and companies via its diversified gas provision portfolio, a flexible, low CO₂ emitting electricity generation park and its unique expertise in four key sectors: liquefied natural gas, energy efficiency services, independent electricity production and environmental services.

CIRAD: Centre de coopération Internationale pour la Recherche Agronomique et le Développement (French Agricultural Research Centre for International Development)

The CIRAD, a public body governed by the Ministry of Higher Education and Research and the Ministry of Foreign and European Affairs, is a centre for cooperation in agricultural research specialised in tropical and Mediterranean productions. Its Biomass-Energy Research Unit located in Montpellier (France) is working on designing biomass energy transformation processes for heat, electricity or biofuel production, in particular gasification processes.

CIVC: Comité Interprofessionnel du Vin de Champagne (Wine of Champagne Committee)

The Comité Interprofessionnel du Vin de Champagne manages and defends the shared interests of wine growers and Champagne wine merchants. Its main missions include the organisation and economic balance of this line of industry in addition to the development of its reputation and the protection of its regional name. It also plays a role on a technical level in the research for excellence and actively works to promote sustainable development. The CIVC also generated the carbon footprint of the Champagne line of industry in 2003 and while at it, installed an action plan, which today comprises fifty basic actions, including the reduction in weight of the bottles and its collaboration in the BioViVe programme. Its aim is to reduce its GHG emissions by 25 % in 2020 and by 75 to 80 % in 2050.

XYLOWATT:	SAINT-GOBAIN EMBALLAGE:	GDF SUEZ:	CIVC:
Gilles Barchman, C.E.O. +32 (0)71/606.800 +32 (0) 478/55.17.98 Anne Soumoy, Communications Officer + 32(0) 495/91.01.77	Claire Moses, Communications Manager, Verallia +33 (0)1 47.62.30.79	Media department: +33 (0)1 44. 22.24.35	Thibaut Le Mailloux, Communications Manager +33 (0)3 26 51 19 30