



XYLOWATT's biomass technology to help reduce the glass industry's carbon footprint

CHARLEROI, Belgium – 18 June 2010:

At the request of Saint Gobain Emballage (SGE) and the Interprofessional Committee of Champagne Wine (*Comité Interprofessionnel du Vin de Champagne, or CIVC*), XYLOWATT is deploying its expertise in biomass gasification in order to replace fossil fuels with new and renewable energies. The aim of the project for which XYLOWATT will deliver a NOTAR® gasification reactor is to demonstrate that it is possible to replace a part of the fossil fuels used in glass furnaces with a synthesis gas resulting from biomass gasification, using vine wood in particular. The other partners in this project are GDF SUEZ and the CIRAD.

Heavy consumers of energy, glass furnaces are responsible for the majority of the glass-packaging sector's CO₂ emissions. By replacing a large part of the fossil fuel used with a biomass fuel, SGE is aiming to considerably reduce its furnaces' emissions.

Due to the specific characteristics of the glass furnace, gasification is proving to be the most advantageous process for the introduction of biomass. But as XYLOWATT's CTO Frédéric Bourgois points out, *"the injection of biomass gas into a glass furnace is not straightforward and requires the verification of several technical points. These include in particular the characteristics of the flame from the gas produced by gasification (wood gas) and their effect on the furnace's functioning, which could necessitate the modification of the glass furnace's structure and its energy recovery system."*

From this perspective, the BioViVe (*Biomasse Viticole dans les fours à Verre via un procédé de gazéification – Viticultural Biomass in Glass Furnaces via a gasification process*) project, lasting 3 years and part-funded by the French National Research Agency, will permit the evaluation and characterisation of the "vine wood" resource in Champagne, followed by the optimisation of the wood gasification process in order to obtain a "CO₂-free" synthesis gas tailored to the glass industry's requirements.

For Gilles Barchman, XYLOWATT's CEO, *"Saint-Gobain's choice is more than just an acknowledgement of our leadership in the field. The performance of the NOTAR® reactor was decisive at the time, in terms of the design of the reactor itself and also the quality of the gas produced. For XYLOWATT, it amounts to a strategic position in the gas sector, where financial aid for renewable energies is almost nonexistent, plus the chance to work on a considerably more powerful reactor"*. The 1-MWth gasification reactor will initially be installed at GDF SUEZ's Gas and New Energies Research and Innovation Centre in Saint-Denis (Paris), where it will be involved in a series of tests before being put into service at SGE's hollow glass production site in Oiry (Epernay), which manufactures champagne bottles.

At the end of this Research & Development programme, the BIOViVe partners will validate the possibility of substituting up to roughly 7% of the fossil fuel supplying the Oiry glass

XYLOWATT sa

Your future energy, now!



furnace and will then drive the development of the sector in order to eventually reach substitution rates of up to 50%. *“This is an excellent sustainable development project, since the vine will not only help to produce the champagne, but also the bottle,”* points out a delighted XYLOWATT CEO Gilles Barchman.

On the scale of France as a whole, this represents a potential CO₂ emissions reduction of 350,000 tons per year for glass packaging.

About XYLOWATT and the partners in the BioViVe project



XYLOWATT: Founded in 2001 as a result of 20 years' Research & Development at the Catholic University of Louvain, XYLOWATT is today a fast growing Belgian SME employing 35 people and specialising in the design, construction and operation of biomass gasification units. The development of the NOTAR® reactor in 2006 has permitted the production of a wood gas free from residual tar. The wood gas is used either in industrial applications (glass and brick works, etc.) or injected into a cogeneration unit permitting the combined production of heat and electricity. Currently, XYLOWATT operates three units of this type within Belgium, with a fourth unit due to be delivered in the United Kingdom over the coming weeks.

SAINT GOBAIN EMBALLAGE: A French company from the packaging arm of Saint-Gobain and world number 2 in glass packaging for the foodstuffs market (bottles and jars), Saint-Gobain Emballage produces over 26 billion bottles and jars every year.

GDF SUEZ: One of the first truly global energy companies, GDF SUEZ is present upstream and downstream in the energy, electricity and natural gas chain. By including responsible growth in its core businesses (energy, environmental & energy services), it sets itself the mission of taking up the following major challenges: meeting energy requirements, ensuring safety of supply, combating climate change and optimising the use of resources. In offering innovative energy solutions to private individuals, local authorities and businesses, GDF SUEZ relies on a diverse supply portfolio and a flexible and efficient electricity production pool.

CIRAD: A public body under the dual control of the Ministry of Higher Education and Research and the Ministry of Foreign and European Affairs, the CIRAD is an agronomic research cooperation centre specialising in tropical and Mediterranean production. Its Montpellier-based Biomass-Energy Research Unit is working on the design of biomass energy revalorization processes (most notably gasification processes) for the production of heat, electricity or agrofuels.

XYLOWATT sa

Your future energy, now!



CIVC: The Interprofessional Committee of Champagne Wine manages and defends the joint interests of the winegrowers and champagne houses. Its main roles revolve around the organisation and economic equilibrium of the sector, along with the development of its reputation and the protection of the appellation. It is also involved at technical level in the quest for excellence and works actively for sustainable development.

Would you like more information?

Gilles Barchman

CEO

XYLOWATT s.a.

30 Rue Thomas Bonehill - 6030 Charleroi - Belgium

tel. +32 71 606 807 - fax +32 71 471 214

info@xylowatt.com

www.xylowatt.com