

Antwerp, 6 February 2012, at 11:30 am (local time)

## SOLVAY HAS SUCCESSFULLY COMMISSIONED THE LARGEST PEM FUEL CELL IN THE WORLD AT SOLVIN'S ANTWERP PLANT

### *H<sub>2</sub> powered industrial demonstration 1 MW Proton Exchange Membrane Fuel Cell*

Solvay announced today it has successfully commissioned its 1 MegaWatt (MW) industrial demonstration Fuel Cell at the SolVin plant in Lillo, Antwerp, Belgium. This Proton Exchange Membrane (PEM) Fuel Cell converts coproduced hydrogen (H<sub>2</sub>) in the plant into electricity and is now producing for weeks at a steady rate. The Fuel Cell has generated over 500 MWh in about 800 hours of operation, which amounts to the electricity consumption of 1370 families during the same time frame.

This successful industrial scale-up project containing Solvay's innovative specialty polymers and SolviCore's membrane electrode assemblies brings PEM Fuel Cell technology to a new threshold. The Fuel Cell also increases SolVin's brine electrolysis' energy efficiency.

Fuel Cells convert the chemical energy from hydrogen into clean electricity through an electrochemical reaction with oxygen. The PEM Fuel Cell consists of a large number of membrane electrode assemblies (MEAs) made out of Solvay's specialty polymer **Aquivion® PFSA** membrane and ionomer and **Umicore's** elyst™ catalyst. The MEAs were manufactured by **SolviCore**, a 50-50 joint venture of Solvay and Umicore, in its plant in Hanau, Germany. Dutch companies **NedStack** and **MTSA** have built the fuel cell using SolviCore's assemblies.

Fuel Cells are increasingly considered an important clean power generation technology for a wide variety of applications such as busses, cars, ships, trucks, fork lifts, cogeneration and electricity generation devices. Hydrogen-powered fuel cells produce only electricity and water.

This technological leap was realized in cooperation with **WaterstofNet**, the coordinator of the Project Hydrogen Region Flanders - South Netherlands. This project aims at developing knowhow and projects about hydrogen applications in the region with a clear focus on sustainable hydrogen and early market applications, such as maritime, logistical and interurban applications, with maximum use of European technology.

The Project Hydrogen Region, with a total budget of EUR 14 million, was approved by the Interreg IV Program and is financed by the EU, the Flemish government, the Dutch government and the industry. Hydrogen Region financed Solvay's project budget of over EUR 5 million by EUR 1.5 million. The 1 MW PEM Fuel Cell is the first milestone in the Project Hydrogen Region Flanders - South Netherlands and it is also used by WaterstofNet for research and test programs to endorse implementation of Fuel Cell technology in the region.

**SolVin** is a joint venture of Solvay (75%) and BASF (25%). It is a leader on the Vinyls (PVC) market in Europe and on the PVDC market worldwide.

**SOLVAY** is an international chemical Group committed to sustainable development with a clear focus on innovation and operational excellence. Its recent acquisition of specialty chemicals company **Rhodia** created a much larger player, which is realizing over 90% of its sales in markets where it is among the top 3 global leaders. Solvay offers a broad range of products that contribute to improving the quality of life and the performance of its customers in markets such as consumer goods, construction, automotive, energy, water and environment, and electronics. The Group is headquartered in Brussels, employs about 30,000 people in 55 countries and generated EUR 12 billion in combined sales in 2010. Solvay SA (**SOLB.BE**) is listed on **NYSE Euronext** in Brussels and Paris (Bloomberg: **SOLB.BB** - Reuters: **SOLBt.BR**).

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