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WHEN BUSINESS MEETS THE ENVIRONMENT

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Call 2009

Agreement Number: ECO-09-256180-WS-REC

WS-REC

**DESIGN AND CONSTRUCTION OF A ELV-WINDSCREEN
RECYCLING LINE**

Deliverable D1.1

**Project Presentation Report: to be published in internet as well as printed
for distribution by the Consortium**

Start date of the project: 1st April 2011

Duration: 3 years

Organisation name o lead contractor for this deliverable: Lurederra



| Project | |
|----------------------------|---|
| Dissemination Level | |
| PU | Public V |
| PP | Restricted to other programme participants (including the Commission Services) |
| RE | Restricted to a group specified by the consortium (including the Commission Services) |
| CO | Confidential, only for member of the consortium (including the Commission Services) |

SUMMARY

This deliverable includes the WS-REC project presentation to be published on the project webpage.

PROYECT PRESENTATION

The European project WS-REC has as its principal objective to construct at a pre-competitive scale a windscreen recycling line which enables the recovery of the main materials from which it is composed, glass and PVB. This collaborative project involves industrial and academic centres from different countries.

The European Community produces every year more than 8 million of tones of waste due to the end of life vehicles, from which more than three quarters are recycled. The rest, almost a 25% are land filled. In 2000, a new directive, Directive 200/53/DC, related to the management of end of life vehicles was implemented. The directive states that by January 2006, the reuse and recover of all ELV should be increased to at least 85% (reusing and recycling a minimum of 80%), while by 2015 this percent should be increased to at least 95% in regards to reuse and recover (reusing and recycling at least 85%).

End of life vehicles waste streams are mainly composed by metals (76% of the total weight), glass (up to 3%) and others: rubber, batteries, plastics, etc. Annually around 270.000 tonnes of ELV-glass wastes, mainly from windscreens, are generated in Europe. Windscreens are made of a layer of clear plastic, such as polyvinyl butyral (PVB) which acts as impact absorber laminated between two layers of glass. The PVB represents almost a 10% of the windscreen's weight and its recovery is considered to be rather expensive attributable to different aspects, such as its difficulty to be removed or its materials separation and recycling.

The project requires a very high degree of interdisciplinary and scientific excellence of the partners involved. In this way, the group of organizations participating in the project is well balanced and focused in the key areas of development required, counting with proven expertise in the different and complementary areas which constitute the fundamentals for correct development of the project.

The consortium is therefore composed of six companies which are very complementary, consisting of one car glass repair and windscreen waste manager (Lunarapid), one company with a high expertise in recycling systems (PHB), an organization with deep experience in specific machine design and optimization (MOS), an advanced technological centre with a strong background regarding plastic materials and their recycling as well as project management (Lurederra), an expert machinery designer and constructor to assemble the required lines for separation glass-PVB, purification of PVB and PVB processing (Bildu Lan) and a company specialized in energy engineering and machine innovation (Zaber).

Although the activities of these six companies are very different, they are very complementary, combining the skills of Zaber in energy systems, with the capabilities of PHB regarding design of separation lines, and the expertise of Bildu Lan in machinery design and construction as well as the contribution of MOS with its innovative technical solutions for recycling.

Furthermore, the consortium counts partners from 3 different countries thoroughly selected according to their capacities and expertise, therefore maximizing the chances of success and providing European dimension and relevance. Furthermore, this will also enable quite immediate transferability to at least three European regions.

Most of these partners have been previously working together either in applications regarding recycling PVB (Lurederra, Lunarapid), design of lines for recycling other products (Lurederra, Zaber, PHB, MOS), or design of production lines (Lurederra, Bildu Lan).

On the other hand, the project is based on the technological innovation for PVB purification developed by Lurederra (resulting in WO2009/118426A1), complemented by a powerful industrial support which will enable the design of an efficient recycling line. The whole system is divided in 3 modules and every machinery and tool requirement will be analysed by the participants, especially by the 4 partners with more experience in machine construction and optimization (PHB, MOS, Zaber and Bildu Lan).

The WS-REC project, supported by the European Commission under contract number ECO/09/256180 WS-REC has a total budget of 1.362.337 €. The project will have a whole duration of three years (April 2011-March 2014) and the EC contribution amounts to 681.168 €.