Dow Italia (The Dow Chemical Company group), Whirlpool EMEA and Cannon-Afros are partners in the K-12 Project funded by LIFE, the European Union’s financial instrument supporting environmental and nature conservation projects.

**Life+ Project k-12, Enhanced Insulation Technology for the refrigeration of the future**

The household appliances sector is one of the largest users of electricity in Europe, with about 29% of total consumption, 25% of which is used by refrigerators and freezers. The reduction of energy consumption, stimulated by EU legislation, has been addressed through an appropriate balance between the development of innovative models and new chemicals, on one hand, and between these devices and their impact on the environment, on the other. Energy labelling has contributed significantly by reducing the energy consumption of refrigerators and freezers by about 65% between 1980 and 2015; nevertheless, these consistent and continuous improvements have been cancelled out by the growth of the use of the appliances themselves.

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Dow, Whirlpool and Afros therefore started the K-12 project with the overall long-term objective of contributing to refrigerator energy-saving, demonstrating the feasibility of an innovative technological solution able to greatly influence the thermal insulation market and the entire cold chain. The K-12 project benefits from the experience of Dow, a leading global company in the field of science and technology, Whirlpool, the world’s largest manufacturer of appliances, and Afros, a leading global company in polyurethane engineering and equipment, in order to radically innovate the production process of household refrigerators, insulated with a highly efficient microcellular polyurethane foam able to offer around a 30% reduction in thermal conductivity, thus significantly improving refrigerator and freezer energy consumption. The innovative technological processes for the production of the refrigerator K-12 are being developed by Whirlpool and Afros. For more information, visit: http://www.dow.com/k-12.

**Forthcoming Events**

The first public event of the project will take place in Correggio (RE) Italy, date of the event and detailed program will be communicated in the next newsletter. The aim of the workshop will be to showcase how actions should be taken during the design/production phase of Eco-designed refrigerators to reduce energy consumption, and the related pollution caused, during a product life cycle and the single operation cycles. Whirlpool and DOW will explain the implications of the implementing measures in the energy efficiency, Thermal insulation material and chemical sector. The conference will also present the preliminary evaluation of demonstration.