



ETIA POWERING THE CIRCULAR ECONOMY

he effects of climate change are looming over the horizon. In the battle against global warming and its detrimental impacts, manufacturers around the world are increasingly shifting clear of the 'take and dispose' economy and turning towards a circular economy. Businesses are seeking ways to cut costs and reduce their dependence on conventional resources. The restorative and regenerative design of the circular economy allows minimized waste and a step ahead in attaining sustainability. With the goal of challenging the take and dispose economy with a circular economy is one company that is helping industries carry out processes inspired by nature. ETIA is a French engineering group that provides innovative and sustainable solutions by designing and delivering plants for processing biomass, food products, and industry residues, mainly from the agro-food and energy sectors.

The passionate group of engineers of ETIA specializes in designing equipment that disallows materials from getting wasted, prevents pollution, and helps produce energy. "Our solutions are aimed at decarbonizing the industry by converting the residues and waste into value-added products," says Anna Grochowska, Marketing and Sales Director of ETIA Group.

> The journey for ETIA started back in 1989 when two graduates of The University of Technology of Compiègne, France, came together with the brilliant idea of creating a sustainable solution for the rising demands of the industry to reduce carbon footprint. The duo founded ETIA and developed

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the first flagship patented technology—Spirajoule, which is an electrically heated screw conveyor. The equipment is used for continuous thermal treatment of free-flowing solids and is based on the concept of an electrically heated screw that allows well controlled, different operating conditions and treatment temperatures. At first implemented in the food industry, Spirajoule has been in operation to sanitize and sterilize different foods, spices and herbs.

Thereon, ETIA started to look for ways to add more value to biomass residues around the food industry. Resultantly, it paved the way for Biogreen, which is a process for converting variety of biomass, plastics and wastes into useful products through pyrolysis. ETIA is working on solutions that convert residues from biomass, biosolids, and plastic wastes, producing energy, renewable products, methane, hydrogen and syngas molecules, with over 40 different implementations globally.

To vividly explain the process carried out by ETIA, Anna draws a clear sketch, "ETIA is converting biomass residues of low or no value into renewable, high-added value materials such as biochar or bio coke, which can then be used further in the industry." At the same time, the process produces energy that helps to offset fossil-derived fuels used in the industrial facilities. All that creates not only a powerful environmental impact, but also a strong and viable business model for ETIA clients.

A client success story is testament to how ETIA has proven its competency time and again. A Switzerland-based consumer goods manufacturer generates biogenic waste and utilizes conventional measures to produce steam for manufacturing. The client approached ETIA to seek a solution that would allow them to offset the CO2 emissions from natural gas consumption used to produce steam and at the same time turn their biogenic waste into a valuable resource. Answering to that, ETIA offered a Biogreen process that converts their waste into steam and produces biochar as a way for a viable carbon sequestration.

With such success stories in the quiver, ETIA, now a part of Vow ASA, a market leader in clean technologies for cruise ships, is operating on the intersection of different industries. Along with the valorization of biomass, ETIA is placing a particular emphasis on treating plastic polymers and producing renewables out of them. Additionally, the company is developing toolkits based on proprietary technologies that could help different industries globally to reduce their carbon footprint. Anna sums up, saying, "Our innovative solutions are key to a sustainable future."

Anna Grochowska