

LATEST NEWS

PLANT TRIAL SHOWS POWERFUL PROOF-OF-CONCEPT FOR THE FEASIBILITY OF THE PLASCARB PROJECT'S TECHNOLOGY.

There is an abundance of food waste in the world and the PlasCarb Project is working to transform this into high value graphitic carbon (Renewable PlasCarbon/RPC) and renewable hydrogen (RH₂).

Having started the project in late 2013, a continuous five week pilot trial of the commissioned integrated PlasCarb process has just been successfully completed in Cambridge (Launch: 11 July). Mixed food waste from industrial, catering or domestic food waste sources was converted into RPC and renewable hydrogen (RH₂).

Biogas produced in an anaerobic digestion (AD) plant from food waste was upgraded to biomethane using pressure swing (PSA) adsorption and carbon bed filtration.

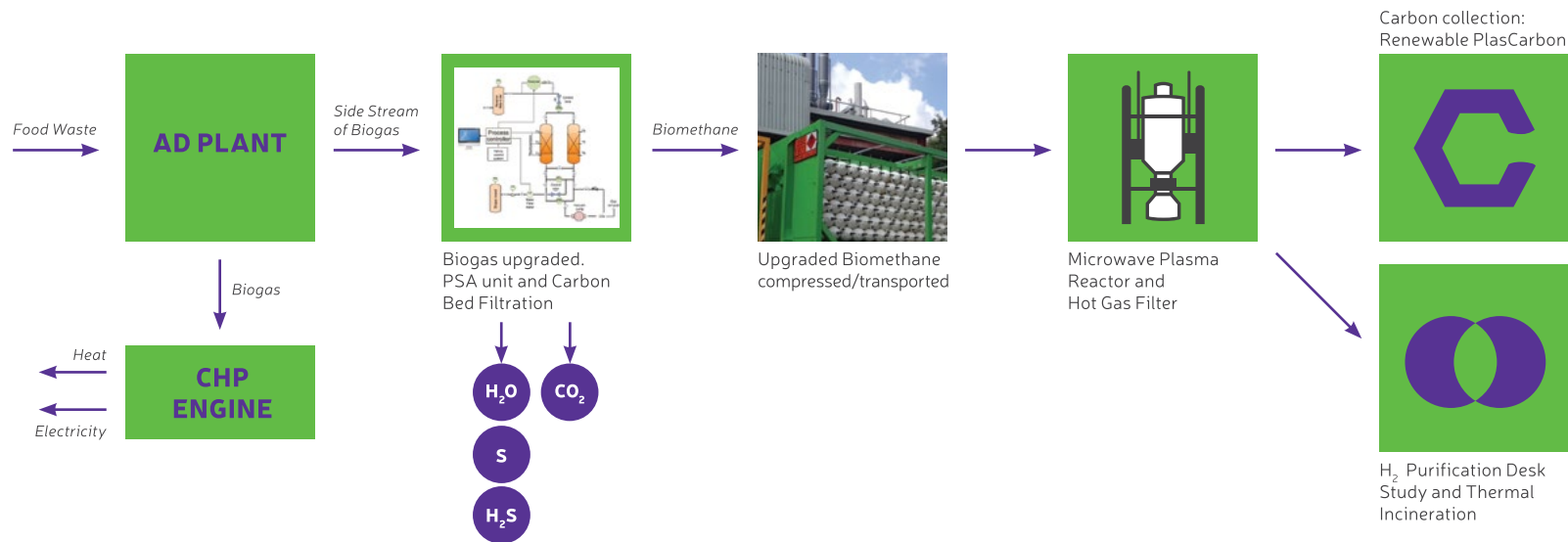
The biomethane was put through a pilot scale microwave plasma reactor with two plasma nozzles.

Each nozzle is capable of producing up to 100 g/h for a total of up to 200 g/h of RPC.

Gaseous products such as hydrogen were flared off during the trial. A desktop purification study is in progress for potential separation and storage for the use of gaseous products on a larger scale.

The results of this pilot trial are a very powerful proof-of-concept for the feasibility of the PlasCarb Project's technology.

THE PLANT TRIAL FLOW DIAGRAM



If you wish to learn more about the project, feel free to contact us or follow us on social media. Please see below for details.

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PLASCARB GOES INDUSTRY: ALLOWING VISITORS TO INVESTIGATE THE SAMPLES DIRECTLY AND OBSERVE THE PROPERTIES OF RENEWABLE PLASCARBON.

PlasCarb was presented with an exhibition stand at the ANM2016 – 7th international conference on Advanced Nanomaterials from the 25th to 27th July in Aveiro, Portugal. The three-years project, is to conclude in November 2016. Partners of the consortium can look back on a wide range of activities as well as results achieved which have been presented at this conference.

Over the three days of the conference PlasCarb's partners offered interested visitors a wealth of informative and interactive materials, personal discussions as well as two oral conference presentations about ongoing research ventures.

Visitors had the chance to receive first hand information about PlasCarb, its progress and results to-date not only through slide shows and the information fact sheets but also through personal discussions with our experts.

Renewable PlasCarbon (RPC) is one of these products, generated by the PlasCarb technology through the cleavage of biogas which is derived by anaerobic digestion from food waste. RPC is produced from a renewable resource (waste) and has the potential to compete against conventional carbon products from fossil origin in a sustainable (environmentally and socio-economically) way and is now being tested in a range of industrial applications.

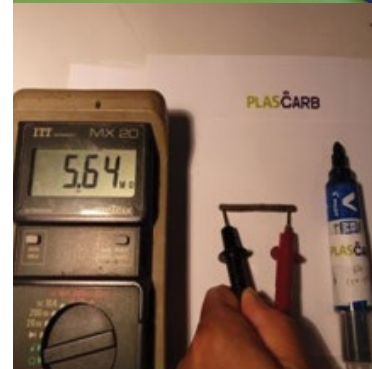
The exhibition samples, with RPC as the basis for materials like conductive inks, rubber, or filaments for 3D printing, arrived freshly from the scientific laboratories of the PlasCarb partners CNRS (FR) and Abalonyx (NO).

Moreover, a variety of exhibition samples from PlasCarb's products where presented.



Interested visitors could investigate the samples directly at the PlasCarb booth and observe the outstanding properties of RPC. Visitors could probe pens containing conductive ink based on RPC.

Any hand-writing could be tested on electric conductivity by simply applying a voltage on either end of the drawn line. The conductivity of the ink became apparent through visualization on the display of a multi-meter.



With these and other illustrations at the PlasCarb booth, the consortium partners highlighted the results and achievements of the project on the one hand. On the other hand, they seek to set up contacts for potential future collaboration with interested people in follow-on research and development as well as commercialization of the PlasCarb technology.

