



UK Chemical Industry Could Save up to 180,000 Tonnes CO₂

Britain's £60 billion chemical industry is one of the UK's most intensive energy using industrial sectors, accounting for some 22% of total national industrial energy consumption. This equates to an estimated cost of £4bn annually, meaning that energy is one of the biggest costs. Indeed for the most energy intensive companies it can represent up to 30% of total costs.¹

Recent advances in Microwave Chemistry have now made it possible to improve not only the sustainability and carbon footprint of the Chemical Industry, but also the financial performance.

[C-Tech Innovation Ltd](#), in a project funded by the Carbon Trust Applied Research Grant scheme, has been a pioneer in the development of the continuous flow microwave reactor. C-Tech has demonstrated energy savings of up to 90%, coupled with CO₂ savings of up to 58%. If implemented and observed across the UK chemical industry this could equate to an annual saving of over 180,000 tonnes of CO₂ as well as representing a significant saving in cost and energy, and a reduction in emissions, this would be a crucial step forward in chemical manufacturing, and could be applied to many areas within the whole of the chemical industry.

The technology developed by [C-Tech Innovation](#) uses a continuous flow microwave reactor, which has resulted in significant energy savings when compared to existing conventional processes. These savings primarily come from the reduced reaction times observed - resulting in a lower energy input. Furthermore, these increased yields mean there are downstream energy savings, and also that a lower inventory of raw material is required for the reaction - thereby reducing the chemical load.

[C-Tech Innovation](#) is heavily involved in research projects and equipment development that have a positive environmental impact in all industrial sectors and is fully committed to trying to commercialise this technology across the breadth of the chemical industry.

For further information regarding Industrial Products, please contact C-Tech Innovation.

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Note to Editors: C-Tech Innovation (<http://www.ctechinnovation.com>) is an internationally renowned, independent consultancy, research and technology development company with more than 40 years' experience in providing innovation and business support to companies, universities and government bodies.

Activities range from research to commercialisation of innovative new products and multi-disciplinary consultancy. The company's worldwide customer base ranges from small start-up companies to large multi-nationals. C-Tech Innovation's facilities and experienced staff provide a complete, flexible service to customers. Fully equipped laboratories and workshops enable

experimental and prototype equipment to be designed, constructed and fully proven in complete confidence. We also offer an end-to-end innovation management service designed to support your business through every step of the innovation journey. It helps you to develop sustainably, supports growth and develops new ways of working. It can equip managers with skills necessary to lead, inspire, ensure long term success and develop a clear competitive advantage.

RESEARCH & TECHNOLOGY DEVELOPMENT
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ⁱ <http://www.cia.org.uk/policy-issue-details.php?id=6>