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Steel mill gases converted into fuel

Carbon Recycling International (CRI) is an Icelandic high-tech company which offers steel manufacturers technology solutions designed to convert residual blast furnace gases into methanol.

CRI and a consortium of European industrial firms have participated in an EU funded project, implementing the technology in a Swedish steel manufacturing plant. The project, entitled FreSMe, is underway in the Swerea MEFOS facility in Luleå, Sweden.

Steel manufacturing is associated with a number of byproducts, including carbon dioxide (CO₂) as well as more energy rich gas which is used for steam and electricity production. Capturing and utilizing surplus energy and CO₂ in a the conversion process developed by CRI will recycle greenhouse gas emissions in the form of methanol, a versatile chemical commodity and increasingly used as liquid fuel for cars and ships.

“The FreSMe project demonstrates that our Emissions-to-Liquids technology is a cost-effective solution for carbon capture and utilisation in steel manufacturing plants,” says Sindri Sindrason, CEO of CRI. “It further demonstrates the versatility of CRI’s ETL technology, which will enable the large scale replacement of oil distillates such as gasoline and diesel with low carbon intensity fuel from a large variety of energy sources.”

CRI produces renewable methanol, under the brand name Vulcanol, at its Emissions-to-Liquids production facility in Grindavik, Iceland. CRI technology catalytically converts hydrogen and CO₂ into renewable methanol. Methanol, one of the most common chemical feedstocks, is widely used in gasoline blending, for biodiesel production and production of chemical derivatives.

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