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Using Separated CO₂ Instead of Sequestering It – HZI and Carbon-Free Develop Technology for EfW

Hitachi Zosen Inova and CarbonFree Chemicals Holding signed a memorandum of understanding concerning the joint development of technologies for separating and mineralizing CO₂ from flue gases of energy from waste plants (EfW). This will be based on CarbonFree's patented SkyCycle™ technology.

Zurich, Switzerland / San Antonio, USA. The Swiss-Japanese cleantech company Hitachi Zosen Inova (HZI) and the innovators at CarbonFree Chemicals Holding LCC (CarbonFree) in the USA have signed a memorandum of understanding (MoU) and are now planning to join forces in implementing a unique solution to reduce the carbon footprint of the waste industry. Texas-based CarbonFree developed its separation and mineralization technology some 15 years ago and has refined it further to create the SkyCycle™ concept. This process allows the CO₂ contained in industrial flue gases to be captured at the source. The CO₂ is being reacted with calcium to form mineral calcium carbonate – a stable, non-toxic, valuable component which has many uses, including as a raw material in the construction industry, a fertilizer, and a mineral filler in the paper, paint, and plastics industries. The high achievable capture rates can enable incineration plants to become carbon sinks. The system is geographically independent: it does not require storing CO₂ in a gaseous phase underground, nor additional pipelines for transportation. The MoU expresses both companies' desire to integrate the technology within existing and new energy from waste plants.

A Win for Both Companies

The further development of this technology opens the way to new projects for both companies. "We are delighted to have found an experienced partner in HZI that can help us to adapt our technology directly to EfW processes. Branching out into this industry will bring us much closer to our goal of separating 10% of the CO₂ emitted by industrial processes worldwide," says Scott Gardner, CFO of CarbonFree. Fabio Dinali, Vice President Business Development at HZI, adds: "In the best-case scenario, our joint efforts will help us to reduce CO₂ emissions from EfW plants to zero or even negative and make our technologies even more embedded within the circular economy changing our plants from being WtE to real WtX plants. At the same time, we will be creating a marketable zero carbon emission end product. In CarbonFree, we have secured a partner that already has 15 years of experience in carbon capture utilization and an impressive record of success."

With the MoU now signed, the active phase of the project begins immediately.

Attachment: HZI_MoUCarbonFree.png

Photo: HZI and CarbonFree are jointly developing technologies for separating and mineralizing CO₂ from flue gases produced by energy from waste plants. Photo copyright CarbonFree.

About Hitachi Zosen Inova

Zurich-based Hitachi Zosen Inova (HZI) is a global leader in energy from waste (EfW) and renewable gas, operating as part of the Hitachi Zosen Corporation Group. HZI acts as an engineering, procurement, and construction (EPC) contractor and project developer, delivering complete turnkey plants and system solutions for thermal and biological EfW recovery. Its solutions are based on efficient and environmentally sound technology, are thoroughly tested, and can be flexibly adapted to customer requirements. HZI's Service Group combines its own research and development with comprehensive manufacturing and erection capabilities to provide support throughout the entire plant life cycle. HZI works for customers ranging from experienced waste management companies to up-and-coming partners in new markets worldwide. Its innovative and reliable waste, flue gas treatment, gas upgrading, and power-to-gas solutions have been part of more than 700 EfW and biogas reference projects delivered since 1933.

To find out more about HZI, please visit www.hz-inova.com.

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About CarbonFree Chemicals Holding, LCC

CarbonFree is a private company focused on advancing the net-zero ambitions of both CO₂ emitters and consumers of carbon-negative chemicals. CarbonFree invested 15 years into research and development to prepare to bring a technology to carbon-emitting plants around the world called SkyCycle™. This on-site solution mineralizes CO₂ captured from industrial point source emitters and creates products for sale or safe storage, such as calcium carbonate (PCC & limestone), sodium bicarbonate (baking soda), and hydrochloric acid (HCl). Learn more at carbonfree.cc or follow CarbonFree on Twitter and LinkedIn.

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