

Reducing CO

Converting carbon dioxide into commercially useful products reduces emissions, while breathing new life into your production process.

Operating a processing plant in the current Green Age presents a number of challenges, not the least of which are the costs, time and resources associated with limiting carbon dioxide emissions. With that in mind, a wide range of technologies are being investigated that increase production efficiency, decrease energy needs, and limit carbon dioxide and other greenhouse gas emissions.

Options under consideration include the use of underground geological formations or the ocean floor where, once appropriately captured and preserved, these greenhouse gases could be disposed. And while those approaches work out the logistical issues and garner greater feedback on potential environmental ramifications, Carbon Sciences Inc. offers another interesting take on CO₂ mitigation.

The company has expanded its technological efforts to include a new way of converting carbon dioxide into commercially useful products via the production of precipitated calcium carbonate (PCC). Although the production and usage of PCC, which basically has the same chemical composition of limestone, marble or chalk, is nothing new, the potential to take Carbon Science's technology and combine it with a plant's CO₂ emissions is intriguing to say the least.

Calcium carbonates, including PCC, are considered to be non-toxic. In the U.S., the Food and Drug Administration has affirmed calcium carbonate to be generally recognized as safe (GRAS). As long as the PCC meets certain purity requirements, it can be used as a direct food additive, as a pharmaceutical or as an indirect additive in paper products that come in contact with food. Similar acceptances and approvals exist around the world where PCCs are widely used in these applications, according to the company.

It's also true that this is a completely green initiative. Not only is a potentially harmful gas being removed from the environment, but the CO₂ mitigation market is also being projected to reach \$400 billion by 2030.

The company's management believes that energy- and CO₂-intensive industries, such as paper production, will welcome this cleaner technology because it offers two very important benefits—lower cost and carbon neutrality. For example, a paper mill with an integrated PCC plant would be able to transform its own emissions into PCC for immediate use in paper production.

Carbon Sciences is positioned as being a technology-developing company, which aims to transform harmful carbon dioxide emissions from human-created sources into earth-friendly products. More information is available by visiting

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