

# **Economical CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub> Capture from Fossil Fuel Utilization with Combined Renewable Hydrogen Production and Large Scale Carbon Sequestration**

Danny Day

Eprida, Atlanta, GA, USA  
<danny.day@eprida.com>

A technical and economic overview will be presented covering recent research of a carbon capture process. In this system, agriculture energy crops and forestry residue are used to produce hydrogen and charcoal, which acts as a catalytic agent for the formation of sequestered carbon compounds from fossil fuel combustion containing high percentages of available nitrogen for farming applications. While a portion of the hydrogen is consumed, 3-4 times as much is produced for utilization or sale. Production and processes appear economically and environmentally attractive for ingredients in fertilizer manufacture and evidence will be presented for their contribution to long-term soil fertility increases. The market impacts are reasonable and developing profitable and mutually beneficial roles for fossil fuel, agriculture and forestry can provide a reasonable migration to sustainability. This relative low cost and potentially profitable method for CO<sub>2</sub> capture may have appropriate application where value for the CO<sub>2</sub> cannot be created from other profit centric technologies. Other benefits, applications and most recent analytical analysis will be presented.

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