Solutions4CO$_2$'s Integrated Biogas Refinery™ Plans to Transform the North American Biogas Industry

October 16, 2012

Toronto, Ontario, Canada — Solutions4CO$_2$ Inc. (the "Company" or "S4CO$_2$") (TSX Venture: SFC), reports that EU countries have an installed base of over 8,000 Anaerobic Digesters (AD) that were developed over the last ten years with the support of government regulation and subsidies. The EU has therefore demonstrated that renewable energy generated from this source of biogas is an attractive alternative to the use of fossil fuels. Without similar forms of support, the development of this source of renewable energy in North America has been limited to 200 AD installations to date.

Solutions4CO$_2$'s (S4CO$_2$) Integrated Biogas Refinery™ (IBR) platform materially improves the economic and environmental viability of new AD projects in North America by reducing payback periods and addressing air and water permitting issues.

North America Lags in Alternate Energy from Biogas

Despite the significant economic and environmental benefits of generating alternate energy from AD biogas, North America, with less than 200 AD installations, has lagged behind other parts of the world in the deployment of AD technology. As previously mentioned, Europe has over 8,000 installations, mostly on large commercial farms, and this figure is expected to grow to over 25,000 by the year 2020.

European legislation regulates the diversion of waste organics away from landfills to other solutions such as AD biogas operations. To ensure the economic viability of these alternate energy projects, European governments provide operators with long term subsidized power purchase agreements. This is not the case in most of North America where few government power purchase subsidies exist and regulations for diverting organics from landfills are just emerging in many states. As a result, AD projects rely heavily on revenue streams from tipping fees and co-products for their economic viability, leaving many AD developers attempting to attract funding in these challenging financial times with five to seven year project paybacks.

Furthermore, AD developers in North America face strict environmental regulations that relate to air and water quality, making the permitting of both new and existing facility upgrades lengthy and costly. Meeting tight air quality regulations surrounding hydrogen sulphide (H_2S) emissions is a particular challenge. The presence of corrosive H_2S in the AD biogas also adds to the maintenance cost of the gensets used to process the biogas stream into power.

"Solutions4CO$_2$'s Integrated Biogas Refinery™ provides AD developers with real solutions to these economic and environmental challenges," said Douglas Kemp-Welch, S4CO$_2$'s Chief Executive Officer.

Integrated Biogas Refinery™

S4CO$_2$'s Integrated Biogas Refinery™ addresses the economic and environmental hurdles facing the development of a robust AD industry in North America by integrating AD platforms with higher value added co-product platforms to form an integrated "Waste to Co-Product" solution. The IBR can be integrated with any form of AD technology (plug flow, mixed, fixed film) and with numerous algae cultivation and production platforms for the extraction of high value added co-products. The microalgae cultivation and production system employs large scale indoor photo bioreactors to grow specialized strains of microalgae for extraction of high value nutraceutical and pharmaceutical co-products. The enabling technology in the IBR platform is S4CO$_2$'s modular and linearly scalable Biogas Purifier and Infusion System™ (BPIS) which efficiently and effectively links the AD frontend with the backend value added co-product platform.

The IBR feeds agricultural, commercial and municipal organic waste into the AD to produce biogas. The Biogas Purifier and Infusion System™ removes over 85 percent of the CO_2 and over 95 percent of the H_2S from the biogas stream and delivers a purified 90 percent methane stream to the genset for more efficient power production. This purified methane stream results in lower capex and maintenance costs for the genset and the achievement of the higher air quality standards for H_2S.

The BPIS utilizes a patented micro porous hollow fibre technology to separate and infuse the CO_2 and H_2S into water, which is then delivered to an indoor algae cultivation system for the production of high value co-products targeted at the nutraceutical and pharmaceutical markets. The CO_2 and H_2S are completely dissolved into water, resulting in two to three times enhanced algae growth rates over traditional fine bubble spargers, as well as the permanent sequestration of the CO_2 and H_2S. Along with the AD water, over 90 percent of the water utilized in the IBR is recycled and reused. The high value added algae oil can then be extracted from the algae biomass and fractioned into nutraceutical and pharmaceutical grade products through S4CO_2's extraction and fraction technology.

S4CO_2's IBR is a closed loop system that utilizes all of the outputs of the AD system as inputs to the co-product platform. Power, CO_2, H_2S, clean methane, water and digestate from the AD are utilized as inputs to the co-product platform, with all residual co-products sold to generate additional revenue. The resulting revenue enhancement effectively reduces project paybacks to less than three years from the current five to seven years.

North America - the Coming Age of Biogas

Similar to Europe, the agriculture and municipal markets provide the most significant growth prospects for IBR projects in North America.

Agriculture Market

There are over 65,000 dairy farms in the U.S., with herds ranging in size from 50 cows in the northeast, to over 15,000 cows in California. California, Wisconsin, Idaho, New York, Pennsylvania, Florida, Minnesota, Ohio and Vermont are the states with the largest dairy sectors producing the largest volumes of organic waste in the form of manure.

California is the largest agriculture state for both animal manure from dairy farms, as well as food waste from crop farms. The potential for AD biogas based on dairy manure from the 1.7 million cows in California is 1.5 billion m^3 of biogas per year, with the potential to produce nearly 450MW of power while sequestering over one million tons of CO_2 annually.

Municipal Market

According to the U.S. Environmental Protection Agency, in 2010 over 34 million tons of food waste was generated in the U.S. from all sources, such as households, commercial establishments and industrial food processors, representing more waste than any other category but paper. In 2010, food waste accounted for 14 percent of the total municipal solid waste stream of which less than three percent was recovered and recycled. The balance, or roughly 33 million tons was directed primarily to landfills and incinerators. Redirecting these food waste streams into IBR projects presents a significant enhanced revenue opportunity for major landfill operators and AD developers.

Economic and Environmental Impact

S4CO_2's closed loop Integrated Biogas Refinery™ solution optimizes AD revenue, capex and opex. These enhanced economics result in paybacks in the two to three year range, opening potential new funding sources for more profitable AD projects across North America.

The use of organic waste streams in the Integrated Biogas Refinery™ as the feedstock to produce biogas diverts these waste streams from landfills reducing the harmful greenhouse gases (GHG), such as CO_2 and methane, emitted from landfills as the waste decomposes. The completely dissolved CO_2 and H_2S water used in algae cultivation permanently sequesters these harmful GHG gasses, resulting in improved air and water quality to ensure these projects meet environmental regulations.

S4CO$_2$'s Integrated Biogas Refinery™ Commercial Projects

The first IBR installation in the U.S., due for completion in fall 2012, is sited on a 1,500 head dairy farm in Wisconsin. This project will feed cow manure into an AD for 300 cfm of biogas production.

An Integrated Biogas Refinery™ project is being planned for Ontario, Canada and will focus on using Source Separated Organics (SSO) from commercial and municipal organic waste streams for 300 cfm of biogas production. This project is due for completion in 2013. Additional projects are in development for Wisconsin, California and Idaho, due for completion in 2013-2014.

S4CO$_2$ will partner with other value chain partners to develop new IBR projects or design, build, operate and maintain (DBOM) the BPIS as a bolt on to an existing or new AD project.

"We are committed to working with best-in-class companies and academic institutions to further develop the company's current technologies and add to its technology and platform portfolios," said Kemp-Welch. The company partners with reputable academic institutions, including the University of Alberta, University of Guelph, Loyalist College, Lambton College, College Communitaire de Nouveau Brunswick and the National Research Council of Canada for technology development that will add material short and long term value to its IBR technology.

For more information about S4CO$_2$'s technologies and platforms, as well as partnering with S4CO$_2$ to develop the value chain and deploy both Joint Venture and DBOM projects, both in North America and globally, please contact Dil Vashi, Manager, Corporate Development, at 416-859-0909 or dil.vashi@s4co2.com, or Randy Uens, VP, Global Sales and Marketing, at 613-661-6788 or randy.uens@s4co2.com, or visit S4CO$_2$'s website at **www.s4co2.com**. S4CO$_2$ is publically traded on the Toronto Stock Exchange Venture Index under the symbol SFC..

Certain statements contained herein constitute "forward-looking statements". These forward- looking statements are based on current expectations. Additionally, forward-looking statements look into the future and provide an opinion as to the effect of certain events and trends on the business. Forward-looking statements may include words such as "plans", "may", "estimates", "expects", "indicates", "targeting", "potential" and similar expressions. These forward-looking statements, including statements regarding the Company's beliefs in the potential forward-looking execution of contracts or agreements and are based on current expectations and entail various risks and uncertainties. Actual results may materially differ from expectations as more information is gathered or becomes known, or if the Company's estimates or assumptions prove inaccurate. The Company assumes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or any other reason.