OVERVIEW

SAIL CAPITAL PARTNERS (www.sailcapital.com)

SAIL was founded in 2002 as a pioneer in the cleantech investment sector and continues to be one of the sector’s recognized thought leaders. Our comprehensive portfolio currently includes fourteen leading companies spanning the universe of sustainable innovations in the areas of energy storage and efficiency, renewable fuels, electrical efficiency, green cleaning products and water purification.

In this era of profound changes in the way we produce and consume valuable resources, SAIL focuses on exceptional profit opportunities as a result of inefficiencies in the global markets. Our tea of uniquely talented investors employs their decades of experience and cleantech-related networks to the most exciting venture investment opportunities.
Ener-Core Completes Successful DoD Demonstration Project

Ener-Core, Inc. (OTCQB: ENCR), whose proprietary Gradual Oxidation technology and equipment generates clean electric power from low quality and waste gases, just announced the successful completion of its demonstration project at the Department of Defense’s (DoD) Fort Benning, GA Army post. The Ener-Core 250 kW Powerstation, the only solution to offer both methane pollution control and energy generation, converted previously wasted landfill gas into enough renewable electricity to power 250-300 homes. The clean energy produced at Fort Benning contained near-zero emissions of nitrogen oxides (NOx) and served to reduce both the Army’s carbon footprint and its bottom line.

"Ener-Core is thrilled to have this demonstration confirm that our system exceeds the strictest NOx emissions standards for methane power generation and pollution control, and is ideal for ultra-low quality gas," said Boris Maslov, President of Ener-Core. "These types of gases have been deemed useless due to the fact that no technology was available to convert them to energy in a financially viable manner. Now that this technology exists and is proven, we look forward to deploying this into a wide variety of sites across the US and overseas, where low-quality waste gases are being either flared or directly emitted into the atmosphere, and working directly with the various industries that currently generate these gases in converting them to power while at the same time protecting our environment," Maslov said.

"In recent independent testing, the Ener-Core system has demonstrated significantly lower emissions of NOx and non-methane organic carbon than many waste-to-energy solutions," said Tim Hansen, Director of Advanced Energy & Transportation Technology at Southern Research Institute, who commissioned the demonstration. "We are encouraged by Ener-Core’s progress during the demonstration period and look forward to widespread commercial deployment for the technology," Hansen said.

The system architecture and proprietary technology allow for utilization of all sources of methane gas, even from closed landfills. The Fort Benning installation ran on previously unusable methane gas and produced a cost-effective source of renewable power.

Southern Research’s independent tests during the demonstration were conducted per standard reference methods of the U.S. Environmental Protection Agency. Among the results, which have since been formally published, the Ener-Core system emitted less than five percent of the California Air Resources Board’s 2013 (CARB 2013) allowable limit for nitrogen oxides.

"The CARB 2013 standard is considered to be among the strictest in the world, and our NOx emission results are unprecedented for a turbine or reciprocating engine running on waste gas," said Maslov.

The Fort Benning Ener-Core Project was funded by the DoD Environmental Security Technology Certification Program (ESTCP), which seeks innovative and cost-effective technologies to address high-priority environmental and energy requirements for the DoD. The system was originally commissioned in November 2011. As Richard Kidd, Deputy Assistant Secretary of the Army (Energy & Sustainability), remarked at the system’s 2011 ribbon cutting, "We are converting what was once a waste stream, a pollutant, a contaminant, and a liability, into what will be a resource going forward."
Coca-Cola has always been more focused on its economic bottom line than on global warming, but when the company lost a lucrative operating license in India because of a serious water shortage there in 2004, things began to change.

Today, after a decade of increasing damage to Coke’s balance sheet as global droughts dried up the water needed to produce its soda, the company has embraced the idea of climate change as an economically disruptive force.

“Increased droughts, more unpredictable variability, 100-year floods every two years,” said Jeffrey Seabright, Coke’s vice president for environment and water resources, listing the problems that he said were also disrupting the company’s supply of sugar cane and sugar beets, as well as citrus for its fruit juices. “When we look at our most essential ingredients, we see those events as threats.”

Coke reflects a growing view among American business leaders and mainstream economists that global warming is a force that contributes to lower gross domestic products, higher food and commodity costs, broken supply chains and increased financial risk. Their position is at striking odds with the longstanding argument, advanced by the coal industry and others, that policies to curb carbon emissions are more economically harmful than the impacts of climate change.

“The bottom line is that the policies will increase the cost of carbon and electricity,” said Roger Bezdek, an economist who produced a report for the coal lobby that was released this week. “Even the most conservative estimates peg the social benefit of carbon-based fuels as 50 times greater than its supposed social cost.”

Some tycoons are no longer listening.

At the Swiss resort of Davos, corporate leaders and politicians gathered for the annual four-day World Economic Forum devoted all of Friday to panels and talks on the threat of climate change. The emphasis was less about saving polar bears and more about promoting economic self-interest.

In Washington, the World Bank president, Jim Yong Kim, has put climate change at the center of the bank’s mission, citing global warming as the chief contributor to rising global poverty rates and falling G.D.P.’s in developing nations. In Europe, the Organization for Economic Cooperation and Development, the Paris-based club of 34 industrialized nations, has begun to warn of the steep costs of increased carbon pollution.

Nike, which has more than 700 factories in 49 countries, many in Southeast Asia, is also speaking out because of extreme weather that is disrupting its supply chain. In 2008, floods temporarily shut down four Nike factories in Thailand, and the company remains concerned about rising droughts in regions that produce cotton, which the company uses in its athletic clothes.

“That puts less cotton on the market, the price goes up, and you have market volatility,” said Hannah Jones, the company’s vice president for sustainability and innovation. Nike has already reported the impact of climate change on water supplies in its financial risk disclosure forms to the Securities and Exchange Commission.

At Davos and in global capitals, companies are also lobbying governments to enact environmentally friendly policies. But the ideas are a tough sell in countries like China and India, where cheap coal-powered energy is lifting the economies and helping to raise millions of people out of poverty. Even in Europe, officials have begun to balk at
the cost of environmental policies: On Wednesday, the European Union scaled back its climate change and renewable energy commitments, as high energy costs, declining industrial competitiveness and a recognition that the economy is unlikely to rebound soon caused European policy makers to question the short-term economic trade-offs of climate policy.

In the United States, the rich can afford to weigh in. The California hedge-fund billionaire Thomas F. Steyer, who has used millions from his own fortune to support political candidates who favor climate policy, is working with Michael R. Bloomberg, the former New York mayor, and Henry M. Paulson Jr., a former Treasury Secretary in the George W. Bush administration, to commission an economic study on the financial risks associated with climate change. The study, titled “Risky Business,” aims to assess the potential impacts of climate change by both region and sector across the American economy.

“This study is about one thing, the economics,” Mr. Paulson said in an interview, adding that “business leaders are not adequately focused on the economic impact of climate change.”

Also consulting on the “Risky Business” report is Robert E. Rubin, a former Treasury Secretary in the Clinton administration. “There are a lot of really significant, monumental issues facing the global economy, but this supersedes all else,” Mr. Rubin said in an interview. “To make meaningful headway in the economics community and the business community, you’ve got to make it concrete.”

Although many Republicans oppose the idea of a price or tax on carbon pollution, some conservative economists endorse the idea. Among them are Arthur B. Laffer, senior economic adviser to President Ronald Reagan; the Harvard economist N. Gregory Mankiw, who was economic adviser to Mitt Romney’s presidential campaign; and Douglas Holtz-Eakin, the head of the American Action Forum, a conservative think tank, and an economic adviser to the 2008 presidential campaign of Senator John McCain, the Arizona Republican.

“There’s no question that if we get substantial changes in atmospheric temperatures, as all the evidence suggests, that it’s going to contribute to sea-level rise,” Mr. Holtz-Eakin said. “There will be agricultural and economic effects—it’s inescapable.” He added, “I’d be shocked if people supported anything other than a carbon tax—that’s how economists think about it.”
The benefits of energy efficiency improvements are well known—lower electricity demand and utility bills, and good-paying green jobs. But one analysis shows the return on investment from efficiency investments may be even more massive than previously thought.

Energy efficiency retrofits carried out in 16 cities across 8 Southeast US states from 2010-2013 created a 387% return on investment (ROI), according to a recent report from the Southeast Energy Efficiency Alliance (SEEA).

The SEEA energy efficiency retrofit effort spurred $3.87 million in economic input and 17.28 new jobs for every $1 million invested, an intense spurt of green economic growth in new spending, reduced energy costs, and associated spending created by newfound money through worker income or utility bill savings.

SEEA’s energy efficiency program was seeded by $20.2 million in funding from the U.S. Department of Energy and targeted homes and businesses in Alabama, Florida, Georgia, Louisiana, North Carolina, South Carolina, Tennessee, and Virginia.

At the program’s conclusion, more than 10,000 building energy audits were completed, resulting in more than 6,000 residential and commercial building retrofits. The analysis was conducted by the Cadmus Group using advanced economic modeling software comparing the effects of program-related spending on the regional economy to a hypothetical baseline in which these energy efficiency investments did not exist across the economies of the eight states.

A wide range of economic benefits contributed to the overall $78.3 million in regional economic output created by SEEA’s energy efficiency upgrades. $55.7 million in economic output and 240 jobs were created through direct effects from program spending, while $22.2 million in economic output and 106 jobs were created via direct effects like efficiency goods and services. Induced effects from households or workers spending newfound money on consumer goods or services created an additional $366,471 in economic impacts.

“There’s a lot of enthusiasm for what’s happened at the state and local level, for very good reason,” said Danielle Byrnett of DOE’s Better Buildings Neighborhood Program. “The models the SEEA program consortium has proven show the tremendous return on investment that’s possible.”

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*Columns may not add up to totals due to rounding.
Mounting scientific evidence underscores the crucial importance of reducing methane emissions in the U.S. The latest study, published this month in the journal *Science*, reviewed available data from the past 20 years and found that methane emissions from the U.S. natural gas supply chain are almost two times greater than current official estimates—flagging once again that methane emissions are a serious problem. The Stanford-led team also concluded that the current levels of methane leakage negate the climate benefit of switching to natural gas under some scenarios.

This sobering assessment joins a growing list of recent studies that point to higher than expected levels of methane emissions from the oil and gas industry.

Just a few months ago, a Harvard-led team published a paper in the *Proceedings of National Academy of Sciences* (PNAS) that found total methane emissions from all sources (e.g. livestock, landfills, oil and gas, etc.) were roughly 50 percent higher than U.S. Environmental Protection Agency estimates for the same time period, 2007-2008.

This followed on the heels of the September 2013 PNAS paper, in which a University of Texas team looked at emissions from some activities associated with hydraulically fractured wells for the first time. The UT led bottom-up study was the first study released in EDF’s methane research series. Though it found total emissions for the production segment of the natural gas system to be similar to EPA estimates, it also found that emissions from some sources were much higher than EPA estimated—valves, compressors, and pipes located at the well pad, for example, all showed higher than estimated emissions.

In August 2013, yet another study was released, this time by scientists with the National Oceanic and Atmospheric Administration and the University of Colorado at Boulder, who are known for their expertise with top-down measurements. Published in *Geophysical Research Letters*, the paper reported alarmingly high levels of methane emissions from airplane readings gathered over an area of the Uintah Basin, Utah’s most active oil-and-gas region that includes production, gathering systems, processing and transmission stations.

By reducing harmful emissions of short-lived climate pollutants such as methane, the rate of warming over the next couple of decades can be slowed—something that CO₂ reductions are unlikely to accomplish alone. Over 40 percent of the warming experts expect to see in the next 20 years, as a result of today’s greenhouse gas emissions, will come from short-lived climate pollution that includes methane.

Ener-Core’s successful project at Fort Bennington is a powerful message about the feasibility of addressing methane emissions, with an upside of generating clean electric power.
SAIL Capital Partners was invited to the Blackstone Foundation announcement in Los Angeles this month, and sent Aaron Burch and Sarah Barton as its representatives. At the event, the Blackstone Charitable Foundation announced the final expansion of its campus entrepreneurship program, Blackstone LaunchPad, to Southern California. Southern California becomes the final Blackstone LaunchPad region, following Michigan, Ohio, Pennsylvania, Florida, and Montana.

The Blackstone Charitable Foundation’s three-year, $3.5 million grant will establish a partnership between The University of California, Los Angeles, The University of California, Irvine, The University of Southern California, and The Los Angeles Economic Development Corporation to introduce entrepreneurship as a viable career option and provide over 110,000 university students, regardless of major, with a network of venture coaches and an entrepreneurial support system.

Blackstone LaunchPad California will foster connectivity between the university campuses, business community, and local entrepreneurs to create an environment that nurtures students and provides them the skills and network necessary to succeed as entrepreneurs. With a physical presence on each university campus, Blackstone LaunchPad has the potential to generate some 500 new ventures in California over the next five years.

“When you nurture talent and support aspiring entrepreneurs, you foster the creation of innovations that have the ability shift paradigms,” said Blackstone’s Chairman, CEO, and Co-Founder Stephen A. Schwarzman. “Through Blackstone LaunchPad, students have access to the right tools to take their ideas to market and to truly become successful entrepreneurs with their ventures rooted in California, ultimately strengthening local economies.”

Blackstone LaunchPad is modeled after a successful program developed at the University of Miami in 2008, which has generated 1,413 business proposals, 210 new jobs and drawn nearly 2,600 participants since its establishment. Each regional program established through the Blackstone Charitable Foundation is linked together, drawing ideas and best practices from across 11 campuses, giving student entrepreneurs in Southern California access to a national community of over 350,000 of their peers and expert advisers.

Funding for this program is made possible through The Blackstone Charitable Foundation’s $50 million, five-year Entrepreneurship Initiative, which seeks to target support services regionally for aspiring entrepreneurs creating the high-growth ventures that are known to spark economic growth. Due to the early success of the program, The Blackstone Charitable Foundation was recognized by President Obama’s “Startup America” Initiative and pledged to expand LaunchPad to five new regions over five years. This expansion to Southern California fulfills that pledge.
SAIL Capital Partners (www.sailcapital.com) is a leading cleantech investment firm with a global vision of technologies, markets and opportunities. We invest in cleantech companies with proven technologies, visionary leadership, measurable impact and exciting growth potential. We have invested in a number of today’s leading cleantech companies including Xtreme Power, Ice Energy, The Cleantech Group, Enerpulse, SNTech, Flex Power, Paragon Airheater Technologies, M2 Renewables, Clean Technology Solutions, CNS Response and WaterHealth International. SAIL has offices in California, Toronto, New Orleans and Washington D.C. as well as a global network of investors and advisors.

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