

TechReach

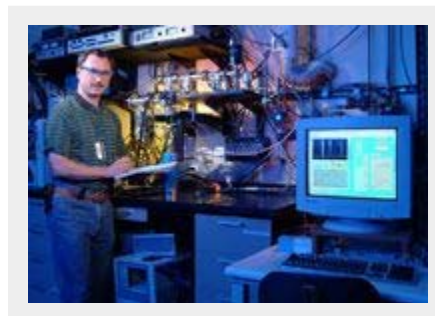


2nd Quarter 2009

TRDA “clean energizes” two start-ups

One year since its debut, the TRDA's Rural Clean Energy Business Assistance initiative now boasts two success stories, and a couple of dynamic clean-energy products that might soon be on their way to market.

[Florida Syngas, LLC](#) designs and builds distributed energy generators that create electricity from glycerol, a waste product of the bio-diesel refining industry. The company's patented GlidArc™ technology converts glycerol into a vapor, where it then enters a reactor to transform into a hydrogen-rich, synthetic gas, or syngas, a valuable, renewable, clean-energy fuel.



The company's previous methods for vaporizing the glycerol proved inefficient and expensive. Through TRDA, Florida Syngas received technical assistance to overcome this challenge. An engineer with Micro Aerospace Solutions, Inc. researched different heating technologies and provided thermal calculations to Florida Syngas, LLC on how much energy would be required to vaporize the glycerol. The findings helped Florida Syngas finalize its product design.

“The exponential growth of bio-diesel production contributes to a growing glycerol supply,” said John Sessa, president of Florida Syngas. “There is already a global glut of this compound available. We look forward to tapping into this supply and providing America with a new, clean-energy fuel.”

South Carolina-based Climax Global Energy, Inc. is an early-stage alternative energy company that has developed a process to economically convert waste plastics, used oils and forestry industry byproducts into valuable, synthetic crude oil, transportation fuels and industrial petrochemicals. Its process incorporates pre-melting of the waste plastics before entering the reactor and main part of the transformation process. Climax Global Energy was initially using an inefficient pre-melting process and expressed concern that the pre-melting step would ignite the plastic, which it wanted to avoid.

Through TRDA an engineer with Florida Tech came to the rescue. That engineer, Dr. Pei-feng Hsu, performed a thermal analysis on how much radiation energy would be required to melt the plastics and provided design recommendations on how to effectively use the heating technology. As a result of his input, Climax Global Energy was able to modify the design of the pre-melting step, and has successfully operated the revised process.

Climax Global Energy expects to begin construction of its first commercial plant this year. The ability to tap into specific areas of expertise, as provided by TRDA, has helped to support and expedite the commercialization of this new technology.

“This initiative is truly making a difference in the lives of small businesses in rural areas throughout the southern part of the U.S.,” said Chester J. Straub, Jr., executive director of the TRDA, which co-funds the \$162,000 project along with the U.S. Department of Agriculture's Rural Business Opportunity Grant (RBOG) program. “Their success will lead to new sustainable jobs, improved product development and increased sales.”

The current project provides free state-of-the-art technical assistance to small, clean-energy businesses in rural regions of Florida, Louisiana, Mississippi and South Carolina. In addition, the TRDA assists companies in completing an application for the Department of Energy's Industry Growth Forum, and developing a presentation, if selected. Sponsored by the National Renewable Energy Laboratory, the Industry Growth Forum is the premiere clean energy event, offering networking opportunities for small start-up business owners with the nation's top energy venture capitalists and corporate investors.

Climax Global Energy was chosen as one of 35 U.S. companies to present at this prestigious event in October 2008.

For information about TRDA's energy programs visit www.trda.org or contact Ryan Greenough at 321-872-1050, ext. 111, or e-mail rgreenough@trda.org.

The Sweet Sounds of Success

The sound of success recently chimed at new decibels for [Audigence, Inc.](#), one of the [TRDA Business Innovation Center](#)'s star tenants. The biomedical software company, devoted to improving all types of digital hearing devices, recently signed an agreement to integrate its tuning technology into a new line of digital hearing aids. Plus, the company recently received another \$2 million from angel investors.



Audigence signed an agreement with [Audina Hearing Instruments, Inc.](#) to utilize Audigence's CLARUJUST™ technology, a new speech-based tuning approach that significantly improves speech clarity on cochlear implants. The technology will be incorporated into Audina's INTUITION® 8 family of custom digital hearing aids.

"CLARUJUST™ will improve the quality of life for millions of people who suffer from severe hearing loss," said Audigence Founder Lee Krause, a computer engineer who is also hearing impaired. He began working on the CLARUJUST™ technology in response to his own experience with a digital hearing device. He partnered with University of Florida researchers in refining and testing the technology.

"We are excited to be working with Audigence and the University of Florida on this new venture," said Frank Robilotta, executive vice president of Audina. "Our team feels the innovative CLARUJUST™ technology will increase patient involvement and result in greater patient satisfaction."

Audigence recently received an additional \$2 million in funding from investors. Lead investors in the latest funding round were Paul Suchoski, former chief executive officer of Optium Corp., and Harry Deffebach and William Troner, principals of Andre-Troner Limited Co., a patent licensing firm. Audigence will use the money to focus on product development, marketing and the initial deployment of the product to its customers.

"Clinical tests have proven the effectiveness of the Audigence technology," said Suchoski. "The company has now moved past the technology development stage and is ready to go to market."

With the latest investment, Audigence has received a total of \$2.75 million in funding to date. The company intends to seek additional investment capital in the next year to support widespread product deployment throughout the hearing device marketplace.

Turning an innovative use of technology into a successful business has been a challenge for Krause, but one made easier with the help of the TRDA. In spring 2007, he completed the TRDA's six-week [Roadmap to Success](#) workshop, which helped him with all aspects of planning, starting and expanding a business. His successful completion led him to becoming a client of the TRDA Business Innovation Center in May 2008.

"The TRDA's Roadmap to Success workshop was definitely a catalyst for allowing us to move to the next level," Krause said.

The TRDA Business Innovation Center helps start-up technology firms in Central Florida grow into financially viable, freestanding, high-growth companies. It offers clients access to intensive mentoring, modern office space, shared office resources, business services, professional development and training, investor networking and more for one monthly fee.

For information about TRDA's Innovation Center activities contact Bonnie O'Regan at 321-872-1050, ext. 107, or e-mail boregan@trda.org.

TRDA announces August Technology Opportunity Forum

In a tough economic climate, nothing is more encouraging than giving high-growth potential technology companies the chance to network with key industry players and sign business deals that will bring their products to market. That's just what the TRDA has in store when it hosts a *Technology Opportunity Forum* on August 11, 2009. The Forum is part of TRDA's Commercialization Assistance Program (CAP) sponsored by DoD and NASA to support Small Business Innovation Research (SBIR) technologies.



Twenty-five promising, Florida-based firms will present their emerging technologies to a national audience of defense and space-related technology decision makers, including prime contractors, strategic partners, government procurement officials and private investors. Nearly all presenters are Phase II SBIR awardees that are trying to move to SBIR/Phase III and commercialize their technologies.

"The Forum represents a capstone event, after working with them for many months," said Bernie Zuzo, TRDA's SBIR commercialization manager. "It will be a fast-paced day with plenty of deal-making opportunities."

More than 120 Florida-based firms, who are actively developing technology solutions for DoD and NASA, were eligible to participate in the Forum. The 25 selected companies represent a broad range of industry sectors including energy, communications, materials, sensors, lasers and information technology.

The TRDA is preparing the participants for the Forum through intense mentorships. Zuzo and his TRDA commercialization team are advising the companies in the areas of business planning, marketing, licensing, government contracting and securing capital.

"We're working to help translate these technologies and succeed in identifying profitable dual-use applications," Zuzo said. "These applications may find their way into the commercial marketplace, and into systems being developed, acquired and maintained for defense and other governmental users."

The Florida Forum is generating such excitement that the TRDA is expanding its reach. The TRDA is collaborating with the Greater Syracuse Chamber of Commerce in New York to host a similar Opportunity Forum on Sept. 15, 2009 for 25 New York-based technology firms.

For more information on the Technology Opportunity Forum, contact Bernie Zuzo at 321-872-1050, ext. 108 or via e-mail at bzuzo@trda.org.

Teacher Quest scores high marks from independent evaluation

One hundred percent of K-12 teachers said they are motivated to improve their teaching as a result of participating in Teacher Quest, the TRDA's signature professional development program. This dynamic result is one of four key findings from a recent independent evaluation of Teacher Quest.

"The results of the evaluation show the Teacher Quest professional development experience continues to be extremely successful," said Dr. Jeanne Diesen, who was commissioned by the TRDA in 2008 to evaluate the program. "Teachers are very enthusiastic about the program and believe students are positively impacted because of their Teacher Quest experience." Diesen is the former Deputy Director for Programs and Administrative Services with the Florida State Board of Community Colleges.



Teacher Quest provides paid summer employment to teachers at select science- and technology-based businesses in Florida. Teachers gain valuable industry knowledge and take it back to the classroom to make science, technology, engineering and math (STEM) studies more exciting and challenging for students. All of this fiscal year's program costs are funded by the U.S. Department of Education (72%) and TRDA's Challenger/Colombia license plate funds. The \$204,436 federal education grant provides partial support for TRDA's 2008 and 2009 Teacher Quest activities.

In evaluating Teacher Quest, Diesen reviewed reports, surveys and interviews with teachers from the 2007 and 2008 summer programs, as well as surveys from 2008 sponsor employers. Other evaluation highlights include the following:

- 97% of teacher respondents rated Teacher Quest as an "above average" professional enhancement program.
- 83% of teacher respondents believe that students are more engaged in classroom projects.
- 100% of business partner respondents gave positive feedback on their assessment of the program.

Diane Matthews, TRDA's director of education said with more careers requiring STEM-based education, programs such as Teacher Quest help students understand the value of such courses.

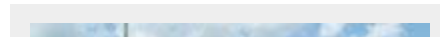
"Many students avoid STEM courses because they believe they are difficult and boring," Matthews said. "By bringing workplace applications of STEM into the classroom, those misperceptions can be changed. Just one teacher with a Teacher Quest experience can impact an entire school. Students get excited and share that enthusiasm with their friends. This is the true value of the Teacher Quest experience."

In her evaluation, Diesen also commended the TRDA for its diligent oversight of Teacher Quest and for ongoing efforts to get more Florida teachers involved in the program each year.

For information about participating in the 2009 Teacher Quest – as a teacher or employer – visit www.trda.org or contact Diane Matthews at 321-872-1050, ext. 106, or via e-mail at dmatthews@trda.org.

Business Innovation Center: Upcoming Events, Q2 2009

April



Apr. 15, 2009

Procurement Technical Assistance Center Counseling
(By Appointment)
8:00 a.m. – 3:00 p.m.
For information contact Tony Espinosa
tespinosa@bus.ucf.edu

**April 30, 2009**

Lenders Roundtable
Small Business Development Center
9:00 – 11:00 a.m.
For more information contact the SBDC
(321) 433-5570 or email pfrimmers@brevardcc.edu

May**May 1, 2009**

S.O.S. Series for Women Entrepreneurs
"Random Acts of Leadership"
Susan Mazza, Clarus Consulting Group, LLC.
1:30 – 3:30 p.m.

May 20, 2009

Procurement Technical Assistance Center Counseling
(By Appointment)
8:00 a.m. – 3:00 p.m.
For information contact Tony Espinosa
tespinosa@bus.ucf.edu

May 20, 2009

Roadmap to Success Workshop
May 20 – June 24, 2009
7:00 – 9:00 p.m., Wednesdays

June**June 17, 2009**

Procurement Technical Assistance Center Counseling
(By Appointment)
8:00 a.m. – 3:00 p.m.
For information contact Tony Espinosa
tespinosa@bus.ucf.edu

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