



entrepreneurs for energy efficiency

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Our mission: to promote successful commercialization of energy efficient technologies developed with the support of the Department of Energy's Inventions & Innovation Program

DOE listens at I&I Commercialization Workshop



Robert DeSaro (L) and Susan Abkowitz (R) at the I&I Focus Group meeting



Lisa Barnett, I&I Lead, (L), John Millhone, Program Manager (C) and Jim Echols, E-3

This past October 10, John Millhone, the Program Manager for the Weatherization and Intergovernmental Grants and Lisa Barnett, the I&I Lead, arranged a focus group to identify the components of what made the I&I Program successful. The participants included DOE personnel, BCS Incorporated meeting facilitators, present and former I&I/ERIP grantees, and a group of "interested parties" from the world of venture capital, the Licensing Executive

Society and corporate licensing. Included in this group was John Balsam, New Horizons Technologies.

Lisa Barnett, the I&I Lead, opened the meeting with an introduction of the I&I Program, emphasizing that the DOE is not in the business of "picking winners and losers." From its beginning in 1977, the ERIP / I&I program's mission has been energy efficiency, in its many forms. Through its evolution to 1987 and the involvement of NIST, the unsolicited proposal process became unnecessarily time consuming and expensive to evaluate and administer. Now that project management has been moved to the Golden Field Office, what had been a staff of thirteen in Washington D.C. now consists of two people. What had been a funding level of \$6 million is now \$2.3 million. The challenge is how to best utilize the limited resources, both monetary and human.

George Dyzacky presented his success story. With 24 years experience in petroleum refining, George used this knowledge base to develop a pattern-recognition methodology that predicts flooding in distillation columns. Two early commercial versions de-bottlenecked one of the largest refineries in North America. Distillation tower flooding occurs at abnormally high vapor and/or liquid rates. The loss in tray efficiencies is attributed to unusual behavior of liquid inventories inside the column leading to flooding of the space in between trays with liquid. Depending on the severity of the flood, consequences range from off spec products to equipment damage and tower shutdown.

Like many independent inventors, he worked with licensing and technology brokers and spent a considerable amount of time and money on lawyers and accountants. Participation in the I&I Program allowed him to fund an independent evaluation through a pilot plant demonstration that would provide the data to publish his results. The networking relationships through the program led him to the University of Texas Separation Research Program to



Shell to Fischer Rosemont and a co-operative agreement worth \$930,000. Beyond the cash, participation in I&I program conferred credibility to potential industrial partners.

Robert DeSaro spoke of his perspective with the program. The amount of money is really not that substantial, compared with the investment of the inventor. The DOE personnel that were associated with the program were not the typical bureaucrats. The talents they brought to the table made the program. Rolf Butters is a truly unique resource. To the inventor, the technology is the easy part; the real challenge is the commercialization process. Could I&I be integrated as a feeder program for other energy efficiency initiatives in the DOE? One of the problems he foresees is that if the program is under-funded and the application process becomes oversubscribed, the potential exists of disappointing future inventors who won't waste their time with the application process if the chances of being funded are small.

The bulk of the meeting consisted of the BCS facilitator, Mr. Kenneth Green, guiding a discussion of the major areas of commercial assistance. The comments or suggestions of the participants were posted on the wall using color-coded index cards, organized into the general areas of technical, marketing, and business. The brainstorming format of the workshop provided an excellent forum for the participants to offer their insight and expertise on the commercialization process. At the end of the session the participants were given the chance to highlight the areas that each felt should be a priority.

A summary of the meeting will be provided by the office of Ms. Barnett sometime in the future

November 2002 Executive Council Meeting, Nashville

This past November 18th, an Executive Council Meeting was held in the Music City Sheraton, in Nashville, Tennessee. Those in attendance were: Redmond Clark, Diane DeVaul, James Echols, Joe Fabiano, David Jamison, and Marcia Rorke

Status of operations

Jeff Sasko submitted a statement explaining that he has to devote all of his attention to his business and personal life for the foreseeable future and will relinquish his responsibilities with E-3. He predicts that he can re-engage in the group's activities in the fall of next year.

Jim Echols has therefore undertaken the leadership post of president and chief executive officer and will nominate members for the board of directors and officers of the corporation. Jim will communicate by email and phone to many members to identify nominees and discuss events with those nominees. Jeff will remain as chairman.

Administrative operations will be moved to Houston, Texas, where Jim Echols is located. His address is: 3740 Garnet Street, Houston, Texas 77005. His telephone number is (713) 665-4632 and his fax is (713) 665-3868. His email is sidtec@houston.rr.com.

The Oak Ridge National Laboratory executed a contract with E-3 for \$9,800 to plan and conduct activities of mentoring, an annual meeting and to develop a quarterly newsletter. The contract named Jeff Sasko as the point of contact, which will be amended to name Jim Echols. The newsletter was the first deliverable to that contract, and this meeting established the first step to develop a mentoring process and start the planning for an annual meeting in the spring. The



incorporation must be filed prior to submitting reports and deliverables to activate the contract and invoice for tasks.

Pilot Project Plan for Mentoring

A preliminary draft of the mentoring process was distributed and discussed at the meeting. Actual mentoring activities will necessarily be determined on a case-by-case basis according to the inventor's desires, the technology and the market opportunity. It was proposed that the mentoring process begin with a "boot-camp" that would introduce the grantees to the business planning process and to train them on the criteria required to commercialize their technology. It was concluded that the pilot project would match mentors to two or three grantees who desired such a relationship, and these mentors would conduct training, guidance and assistance purely one-on-one. The experiences and results of this initial trial can then be used to elaborate and refine a continuous process for mentoring that E-3 would commit to conduct.

This mentoring pilot project will officially commence with the annual meeting. Mentors will be announced for two or three grantees that request a mentor. The mentorees for this pilot will be individuals who have recently completed their R&D project and wish to pursue business ventures &/or licensing based on their technology. Dave Jamison will identify such grantees.

Grantees requesting a mentor will be required to submit an application consisting of their contact information, work history, technology description, business interests and an explanation of what they expect to gain from a mentor. Information on potential mentorees and their technologies will then be distributed to volunteers for review and selection. Selected candidates will contact their proposed mentors for an initial interview and discussion of first steps.

One of the challenges facing the I&I Program and E-3's role in the future, is how to implement what was effective in the former rendition of the program without appearing to dredge up the past; packaging what worked in a new and forward-thinking way. Two of the benefits that the program provided was the training / education/ introduction to entrepreneurship through the CPW and the contacts of the DOE staff. One way to do this is for E-3 to step up through a combination of volunteerism and professional guidance. The question is how to pull it off. Where is the money going to come from?

Annual Meeting

An annual meeting is being planned for the spring in Washington, D.C. The major change from last year is that the Capitol will not be available this year. We are still trying to identify a date prior to congress adjourning, and with the focus on late April. The mid-week timing is necessary to make it convenient for E-3 members to visit their congressional representatives if they wish. (Most of congress is not available on Monday and Friday)

This year the event will consist of a half-day business meeting limited to existing members, an awards ceremony and another half-day general meeting open to everyone who has an interest in the program that will focus on attracting new members. The first session will concentrate on key business issues, such as officer and board elections, raising funds and initiation of the mentoring project. The last session will review operations, announce mentor projects, and have a speaker on a topic of great interest. Last year's speaker received a considerable number of compliments and we will start early to secure another great speaker on a topic of everyone's interest.



Being an E-3 MENTOR, Is it for You?

The mission statement of our organization is “to promote successful commercialization of energy efficient technologies developed with the support of the DOE’s I&I Program.” E-3 has taken steps to develop a mentoring program as a key element of that support.

Over the last quarter, E-3 called upon its members to formulate a workable program and to volunteer for the pilot. Those members that have stepped forward are:

Kevin Bolin

Robert DeSaro

Larry Farrar

Robert Riley

In Greek mythology, Mentor was a friend of Odysseus who was entrusted with the education of his friend’s son, Telemachus. In E-3, the mentor is a voluntary position taken by an E-3 member who has successfully commercialized technology through business development and who can establish a relationship with an I&I grantee that has completed the initial work plan in their grant. The mentor will commit to day-long working sessions and frequent telephone consultations. The mentor must be interested in the process and the intended outcome: aiding another grantee to succeed at building a business and/or commercializing the technology. The mentor must be willing to commit his time and energy and to report to E-3 the progress that the mentoree is making.

Give Support

- Commit time and agree to meet
- Show genuine interest in mentoree, his/her aspirations, the challenges
- Serve as advocate for the mentoree to others
- Provide encouragement and positive expectations
- Build trust, honor commitments

Offer Challenges

- Assign tasks, have the mentoree take on new roles and responsibilities
- Engage in discussion questioning the mentorees assumptions and continually ask what he or she is learning; serve as a sounding board and provide candid feedback
- Debrief teachable moments: Look for those rare opportunities that provide powerful new insights, then help the mentoree to fully assess and analyze those insights.
- Set high standards; clearly communicate what you expect and hold the mentoree to high standards of performance.

Provide Vision

- Serve as a model, show that there is a realizable goal. Explain what it takes to succeed and give practical examples of what you have done.
- Provide a mirror: your own experience serves to illustrate what the mentoree seeks to accomplish. Point out what works and some of the pitfalls that will invariably come up.
- Chart a course: play a key role in helping the mentoree look ahead and develop a plan with the business and with life. Assist in planning and be there as counsel when the plan doesn’t work and unanticipated challenges occur.



The Mentoree

The mentorees will be grantees of the I&I Program who have successfully completed their R&D project and at least developed a working prototype of the technology that was funded. Mentoree candidates will be required to complete a questionnaire that explains the application of their technology, the assessed value of the market and market share anticipated, the status of their business plans and execution, their expectations of a mentoring relationship and their goals in business. Mentoree candidates must agree to minimum terms prior to review by mentors:

- The mentoree must take the initiative: doing homework, planning ahead, scheduling appointments, responding to mentor's requests/assignments, etc.
- The mentoree must be willing to work at the relationship - the mentor is not going to do the work for him or her - and the mentoree must be willing to learn, take advice and try new things
- The mentoree must be willing to devote up to 24 hours a month to this effort and travel to the mentor's location, as required for meetings.
- The mentoree must be clear about what they want to accomplish, what they expect out of the association. Each mentor-mentoree arrangement will be individually negotiated, with it clear that there are no guarantees.

The Process

The mentors will provide a biography with areas of expertise to be distributed to grantees along with a presentation of the mentoring program. A fact sheet of grantees wishing to find a mentor will be distributed to the mentors for review and selection. E-3 will assemble an "Expertise Matrix" of the E-3 membership that will be a resource for the mentors to facilitate the process.

Mentorees will be selected by E-3 after review by those volunteering for mentor projects. Jim Echols will distribute applications to the volunteers for review and selection, and mentors will notify Jim within thirty days of selections. Once selections have been made, Jim will notify the mentorees and give them identification and contact information for their mentor. The pairings will then be transmitted to DOE.

It will be an E-3 procedure that all mentors will execute a non-disclosure, non-compete agreement with the mentorees, which must specify information the mentoree will disclose in the relationship. E-3 will develop such an agreement to use. E3 will also develop a Conflict of Interest policy that all mentors sign up to.

The mentorees will make an appointment for telephone interview with their mentor and conduct that interview. The mentor will probe for information needed to anticipate issues and review the mentorees responsibilities and conditions for the relationship. The mentor will also identify any particular requirements he or she has for a mentoring relationship. Once verbal agreement is reached, the two schedule a first meeting to review plans and issues that the mentoree has.

Typically, a mentoring relationship will develop a structured plan of discussions, exchanges of information, and meetings that last about three years. Since there is no formal agreement in writing, it is important that the mentor and mentoree understand and mutually consent to goals and expectations and the anticipated time to reach those.



The process does not prescribe any frequency of contact or meetings. Frequency, scheduling and extent of discussions, meetings and written interactions is the prerogative of the mentor and mentoree in agreement based on goals and expectations. It is recommended that the two have telephone conversations at least every other month to exchange status and progress and that they physically meet at least twice per year. The mentor is required to submit a status of activities and achievements to Jim Echols and Dave Jamison every quarterly via email, telephone or fax.

The arrangement may be extended indefinitely at the mutual agreement of the individuals involved. The arrangement may be terminated at any time by either party by written notice to Jim Echols and Dave Jamison. Relationships that are terminated will not necessarily prejudice future matching of the mentoree with another mentor unless it is reported that the mentoree continuously failed to respond and complete necessary requirements.

Congressional Corner

The House and the Senate have approved the President's \$755.2 billion spending package, which includes the Department of Energy. Although both the House and Senate added \$2 million to the President's \$2.4 million request for the Inventions & Innovations Program, the Senate cut by 2.9 percent the Omnibus Appropriations bill that would fund all the Departments for this fiscal year (the equivalent of \$127,600 for I&I). The more serious problem is that the House funding bill and the Senate funding bill are about \$12 billion apart. It is not clear either when Congress will finish the work on these bills or how particular programs will fare. Speculation is that the program will probably just sustain a small percentage cut similar to that in the Senate version of the bill.

I&I Sponsors Energy-Entrepreneur Web Site

The Inventions & Innovation (I&I) and NICE³ activities under the U.S. Department of Energy's Weatherization and Intergovernmental Program have announced plans to develop the *ENERGY-TECHNOLOGY COMMERCIALIZATION NETWORK (ETCN)* website. This Internet-based toolbox is being designed to serve as a technology commercialization and business planning resource for DOE's Energy Efficiency and Renewable Energy programs and their customers. The site is being developed by the same organization that created and now maintains DOE's award-winning *Smart Communities Network*.

The *ETCN* is being designed to target "energy entrepreneurs" – i.e., those individuals and small businesses involved in the research, development, and commercialization of energy-efficiency and renewable-energy technologies. The overriding objective of the site will be to serve as the primary Internet portal to the information, contacts, and resources needed and valued by energy entrepreneurs. Specifically, *ETCN* is expected to include:



√ **Descriptions on and links to:**

- National, regional, and state *business*-assistance resources for technology developers
- National, regional, and state *financial*-assistance resources for technology developers
- National, regional, and state *intellectual property*-assistance resources
- Commercialization success stories/profiles of successful “commercializers”
- Sources of mentoring services
- Publications/periodicals/books related to technology commercialization
- National, regional, and state conferences and workshops

- √ **A step-by-step guide to technology commercialization ...** What is meant by the term “commercialization;” what options are there for commercialization strategies; what steps are generally attributed to successful technology commercialization; what resources are available to provide further information and assistance; the value of teaming, both for a strong project team and with strategic partners.

The *ETCN* is also expected to include a section dedicated exclusively to past, present, and future I&I grantees. Developed in close cooperation with the Entrepreneurs for Energy Efficiency (E3), this password-only section contain contact information for the grantees, brief summaries regarding their technologies and areas of expertise, and a mentoring matrix designed to help match grantees seeking mentoring assistance with those who have indicated a willingness to mentor.

A significant portion of the content development is expected to be completed by the time the website is ready for launch in early May. Content will continue to be researched and added even after the launch, however – a process that is never truly completed. In addition, link-checking software will be applied weekly to keep links current, and evaluations of the site will be sought regularly from individuals representing E3 and other target audiences.

Questions about the new *ETCN* and suggestions for resources and content to include in the website should be directed to John Balsam with New Horizon Technologies, Inc. at johnb@nhtinc.com.

What's NEWS

Metalforming Controls Corporation

In early 2003, Metalforming Controls was notified that the DOE had selected the company for a NICE3 award totaling \$500,000, as well as an additional \$100,000 from the State of Illinois and \$500,000 from Ford Motors. Metalforming Controls Corporation was a company formed to commercialize a technology developed with the support of the I&I program: The Force Modulator. This technology is expected to accelerate the use of lighter weight metal in metal stamping operations, thus reducing fuel consumption in developed and developing nations.

Red Clark, President



From the SBA Administration's Economic Plan Allows Small Business To Play Big

WASHINGTON – President Bush has unveiled an Economic Growth Package with an emphasis on small businesses and their importance to the American economy. In doing so, the President has delivered on his promise to aid small businesses.

Assistance will come mostly in the form of tax relief. For example, current tax laws permit small businesses to write off up to \$25,000 worth of equipment purchases as expenses. President Bush's plan would increase this limit to \$75,000 to encourage small business owners to buy increased amounts of technology, machinery, and other equipment needed to expand their business. According to some, though, it means more company SUV's.

The Bush economic plan also provides relief for small businesses by proposing a repeal of the onerous death tax. This action will provide assurance that a family-owned business will not suffer an overbearing tax burden or be forced to sell the family business, instead allowing it appropriately to be handed down within the family from one generation to the next.

Call for Nominations - E-3 Energy Savers Award

The Entrepreneurs for Energy Efficiency and the Executive Council encourages its membership to nominate individuals, companies, or technologies to be acknowledge with an E-3 Energy Saver Award. The Council will review nominations and make awards to selected individuals who have excelled beyond their peers. Categories are Energy Savings, Sales & Growth, Exceptional Market Expansion, International Achievement, and Environmental Savings. Awards may be given to more than one company and more than one category may apply to one company if there are distinguishing achievements of equivalent impact.

E-3 Calendar

April, 2003

2nd Annual E-3 Energy Saver Awards Presentation
Washington, D.C.

Please submit comments, suggestions, stories, anecdotes, cartoons, or other items that would be of interest to this community to Jim Echols at sidtec@houston.rr.com