

**Final Report to the U.S. DOE
Research Activities Leading to the Creation of
The Center for Sustainable Energy at Bronx Community College**

Award: DE-FG02-03ER63595

INTRODUCTION/BACKGROUND

1. In 2003, Bronx Community College received a grant of \$481,000 through the United States Department of Energy for the purpose of conducting research-related activities leading to the creation of the Center for Sustainable Energy at Bronx Community College. The award, which was administered on behalf of Bronx Community College by the Research Foundation of the City University of New York, was initially for one year, from October 2003 through September 30, 2004. It received a no-cost extension to June 30, 2005.

This report presents a summary of the activities and accomplishments attributable to the award.

FAMILIARIZATION WITH THE SCOPE OF SUSTAINABLE ENERGY, EXISTING CENTERS AND THEIR MODES OF OPERATION

The familiarization process included the following types of activity:

- Collection and review of informational materials – journals, magazines, news articles, papers, curricula
- Attendance at local, regional, and national meetings addressing aspects of sustainable energy.
- Procurement and review of relevant curricula of institutions preparing students for careers in sustainable energy areas.
- Inviting experts to conduct presentations at Bronx Community College on various aspects of sustainable energy and its future significance and applications.
- Collaborating with other organizations to develop comprehensive presentations and conferences that expand knowledge and awareness of the scope of the field of sustainable energy.
- Visits to sites with sustainable energy projects/programs.

- Ongoing meetings, using the information gathered through the above processes, to conceptualize the most appropriate elements to be included in the development of an urban-focused center at Bronx Community College.
- Engagement of a team of green architects to assist in planning/visioning the scope of what a center could encompass.

The Familiarization process resulted in

- The collection of over 500 magazines, books, articles, computer programs.
- The conduct of at least 10 “informational” presentation at Bronx Community College by experts in various aspects of the field. Some of these presentations were targeted to the Center’s planners, others to college administration, others to a broader public. Over 200 people attended and benefited from these events.
- The Center’s planners met more than 75 times, developing broad strategies defining the appropriate scope for the center and plans for how to proceed with implementing that plan. A plan for the utilization of recently procured space as the center’s site, was also developed.
- Attendance at more than 20 conferences or regional meetings (see attached list.)
- Development of partnerships with at least 10 other institutions of higher education and larger numbers of public and community based entities in furtherance of joint research, education, and training initiatives. The Center also established cooperative relationships with major industry leaders in solar, geothermal.
- Identification of significant roles for the Center in furtherance of sustainable energy applications including solar, wind, hydrogen, fuel cell, geothermal, and electric vehicles and equipment.

IDENTIFICATION OF INFORMATIONAL RESOURCES, MATERIALS

Through visits and correspondence with most academic entities involved in sustainable energy, CSE at BCC has been able to gather the following.

- A library containing over 500 journals, brochures, books, articles, research reports.

- A website that contains references to over 200 recent articles and links to over 50 significant information sources. (The website received its 10,000th hit in June 2005).
- A database containing contact information on over 900 professionals and organizations in the sustainable energy field.

The Center was also able to establish working alliances with key partner organizations, including

- Solar New York whose partnership strengthened the Center's efforts to enable CUNY to become a USDOE "Million Solar Roofs" Partner, which the center now administers.
- New York Metropolitan Sustainable Energy Consortium, an alliance of Center for Sustainable Energy (a City University entity), SUNY – Farmingdale (a State University entity) and the US Merchant Marine Academy.
- New York Clean Cities Marketing Committee, an alliance of government agencies, private energy and transportation corporation, academic, and community organizations.
- CUNY's Sustainable Construction Consortium

DEVELOPMENT OF DATABASE AND WEBSITE

Procedures have been established for the routine updating of CSE's website, which now contains links to over 100 organizations and hundreds of relevant articles.

Similarly procedures have been established for the identification and entry of professionals in the field, into a database of close to 1000 names. The database enables rapid access to individuals based on various aspects including technical areas of expertise.

FACILITY PLANNING

During the period of this contract, the Center for Sustainable Energy successfully pursued site control of a 40,000 square foot building and adjacent 8,000 square foot vehicle maintenance building. Once site control was established, the Center engaged consulting architects, met with various specialists, and visited other sites to develop a plan for the best way to design the new Center for Sustainable Energy. The plan includes space for classroom, research labs, business incubator space, automotive technician training center, and an exhibition hall. LEED certification of the rehabilitation of this 50 year old building was also explored.

CURRICULAR EXPLORATIONS

Research was conducted to identify the areas in which Sustainable Energy Technology would need new workers. This included reviews of national and local data, and ultimately led to the development of a major proposal to the National Science Foundation, to develop two new Associate Degree programs – one in Energy Service Technology, the other in Automotive Alternate Fuel Technology. The proposal was funded, to begin in Fall 2005.

In addition to these two new degree programs, individual courses and certificate program were identified, developed, and offered. This includes training in PV installation, as well as modifications in the College's Building Trades training programs to incorporate alternate energy strategies.

IDENTIFICATION AND ADDRESSING OF POLICY ISSUES

Center staff have stayed current on Federal, State, and local legislation, and developed policy analyses on the implication of regulations and trends, for pursuit of energy – saving approaches. These analyses have been shared through memos, papers, presentations with public Officials, University Leadership, and others.

CONCLUSION

Funding from USDOE enabled the Center for Sustainable Energy to conduct planning, research, and development activities that have placed the center on a strong path to become a vital contributor to encouraging sustainable energy developments in the Bronx and, indeed, the entire New York Metropolitan area.