

## Final Scientific/Technical Report

### 1. DOE Award Number: DE - FG02-05CH11289

**Recipient:** Crowder College

**Project Title:** Crowder College MARET Center Facility

**Working Partners:** KRJ Architects, St. Louis, MO

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2. No authorized distribution limitations required on patentable material or protected data
3. Provide an executive summary, which includes a discussion of:
  - (1) how the research adds to the understanding of the area investigated;
  - (2) the technical effectiveness and economic feasibility of the methods or techniques investigated or demonstrated; or
  - (3) how the project is otherwise of benefit to the public. The discussion should be a minimum of one paragraph and written in terms understandable by an educated layman.

This project was a research facility construction project and did not include actual research. The new facility will benefit the public by providing training opportunities for students, as well as incubator and laboratory space for entrepreneurs in the areas of alternative and renewable energies. The 9,216 -square-foot MARET Center was completed in late 2011. Classes in the MARET Center began in the spring 2012 semester. Crowder College takes pride in the MARET Center, a focal point of the campus, as the cutting edge in education, applied research and commercial development in the growing field of green technology. Attached as Exhibit "A" and made a part hereof, are photographs of the completed project.

4. Provide a comparison of the actual accomplishments with the goals and objectives of the project.

All project tasks and subtasks as outlined in the Statement of Project Objectives included in the Quarterly Progress Reports and Final Progress Reports, attached as Exhibit "B", were met.

5. Summarize project activities for the entire period of funding, including original hypotheses, approaches used, problems encountered and departure from planned methodology, and an assessment of their impact on the project results. Include, if applicable, facts, figures, analyses, and assumptions used during the life of the project to support the conclusions.

This project was a construction project and all project tasks and subtasks as outlined in the Statement of Project Objectives included in the Quarterly Progress Reports and Final Progress Report were met.

6. Identify products developed under the award and technology transfer activities, such as:

This project was a construction project and did not involve product development.

7. For projects involving computer modeling, provide the following information with the final report: N/A

This project was a construction project and did not involve computer modeling.

Electronic Submission. The final scientific/technical report must be submitted electronically via the DOE Energy Link System (E-Link) accessed at <http://www.osti.gov/elink-2413>.

Electronic Format. Reports must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts. Materials, such as prints, videos, and books, that are essential to the report but cannot be submitted electronically, should be sent to the DOE Administrator at the address listed in Block 16 of the Assistance Agreement Cover Page.

Submittal Form. The report must be accompanied by a completed electronic version of DOE Form 241.3, "U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI)." You can complete, upload, and submit the DOE F 241.3 online via ELink. You are encouraged not to submit patentable material or protected data in these reports, but if there is such material or data in the report, you must: (1) clearly identify patentable or protected data on each page of the report; (2) identify such material on the cover of the report; and (3) mark the appropriate block in Section K of the DOE F 241.3. Reports must not contain any limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release. Protected data is specific technical data, first produced in the performance of the award that is protected from public release for a period of time by the terms of the award agreement.

## **EXHIBIT “A”**

Photographs of MARET Center (Completed Project)

Front view of MARET Center



Side view 1 of MARET Center



Side view 2 of MARET Center



Water Reservoirs



Energy Class with Students



Hallway



MEP



Electrical Room



**EXHIBIT "B"**

(Statement of Project Objectives)

August 10, 2005

**STATEMENT OF WORK  
CROWDER COLLEGE  
MISSOURI ALTERNATIVE AND RENEWABLE ENERGY TECHNOLOGY  
(MARET) CENTER  
DOE GRANT NO. DE-FG02-05CH11289**

Crowder College, as grantee, shall furnish or cause to be furnished the necessary facilities, personnel, equipment, materials and other services to accomplish the design, planning and construction of the Missouri Alternative and Renewable Energy Technology (MARET) Center to be constructed on the campus of Crowder College in Neosho, Missouri.

The new MARET Center was designated by the Missouri General Assembly as the State Training Center for Alternative Energy and will serve as a facility to advance the use of solar technology, renewable fuels, and solar home construction. It will serve as a living laboratory, modeling for several new programs and services all the best practices known for solar and thermodynamics systems. The facility will directly support the following new educational programs and community services: including training for businesses and industry use of renewable energy technology for integration into their building design and operation, direct support for business and industry for new-product development of renewable energy technologies, direct support for new-business start-ups in the renewable energy field, and new educational programs in the construction, design and engineering of commercial/residential buildings using renewable energy technologies.

DOE's total funding for this project is \$964,000. The majority of DOE's funding (\$766,610) will be applied toward the early design efforts and initial construction costs of the ~\$9M facility. The new building will be a one-story, 27,500 square-foot facility that will utilize the latest solar and thermodynamic technologies to heat and cool the building and to maximize natural lighting. It will incorporate many of the design and engineering standards associated with "green" building classification. The floor plan will include labs, classrooms, offices, and a reception area to support the MARET Center's programs and services. In addition to the design and construction a portion of the funding will be directed toward salaries for the MARET Center director and for marketing costs associated with the new center.

Crowder College, as grantee, has the responsibility for the design, planning and construction activities associated with the MARET Center and will perform the following:

- Furnish or cause to be furnished the necessary architectural, engineering, and construction management services, if any.
- Manage the cost, schedule and technical performance during the performance of work under the grant, taking appropriate actions as necessary to assure that the project is completed on schedule and within budget.
- Fulfill the reporting requirements in the Federal Assistance Reporting Requirements Checklist (DOE Form 4600.2).
- Conduct, at the Crowder College, periodic meetings to discuss with DOE, project status and progress of the work during the preceding period.