Quarterly Progress Report and
Final Report

Project Title: **Hydrogen Technology Learning Centers for California, Florida & New York**

Covering Period: **July 15, 2005 – September 30, 2005**
This is also the final report for this contract.

Date of Report: **September 15, 2005**

Recipient Organization: **Florida Solar Energy Center**

Partners: **Separate reports will be submitted by UC-Davis, San Diego Miramar Community College and Rochester Institute of Technology. This report covers only the Florida Solar Energy Center portion of the contract.**

Technical Contact: **Mr. Kenneth G. Sheinkopf**
Florida Solar Energy Center
1679 Clearlake Road
Cocoa, FL 32922
(321) 638-1007 Fax (321) 638-1010
sheinkopf@fsec.ucf.edu

Business Contact: **Ms. Mary B. Stanley, Contract Manager**
Office of Research & Commercialization
University of Central Florida
12443 Research Parkway, Suite 207
Orlando, FL 32826
(407) 823-2826 Fax (407) 823-3299
mstanley@mail.ucf.edu

---

1. Project Objective: **To create an innovative hydrogen learning center to educate students, government officials, industry members and the public about the hydrogen economy, technologies and applications. FSEC will be the location of one of the four proposed centers. Each center will develop materials including displays and exhibits, website, courses and publications.**
2. Background: **With the current interest being shown in hydrogen, such diverse audiences as students, regulators, legislators, city officials, industry and the general public need increased awareness of all aspects of the technology. Establishing these four centers would create focal points for answering questions about hydrogen technology and disseminating information through formal classes and informal displays and events. Technical issues cover all aspects**

of hydrogen technology, including properties, safety issues, production, delivery and storage, and fuel cells and fuel cell applications. This is the third quarterly report covered by this contract.

3. Patents: **None.**
4. Publications/Presentations. **None during the past quarter.**
5. Progress in Past Quarter and Current Status: **During this quarter, the database was updated and completed. Copies were sent to several hydrogen energy educators around the country for their review and input, and all new material, revisions and comments have been incorporated. The database is online at the H2USA website (www.h2USA.org). In addition, work has continued to partner with Progress Energy to establish a student program called "Hydrogen: The Power and the Potential."**

TASK 1: Database

The database has been the main task of this contract, and it has been completed and posted on the website. During the past few months, all data has been carefully checked for accuracy. Reviewers have provided information on a number of new programs that have all been incorporated into the final copy. FSEC intends to maintain this database after the completion of this contract and will update it and make revisions as necessary.

Task 2: Educational Programs

During the course of the contract, FSEC's Hydrogen Technology Learning Center was a sponsor of several educational programs. (See http://dbase.fsec.ucf.edu/pls/operation/press_display?pressid=2178 and http://dbase.fsec.ucf.edu/pls/operation/press_display?pressid=2174). The center received appropriate recognition during the programs in signage, printed programs and announcements. Without the support and assistance of the H2USA center, the programs would not have been as successful.

Task 3: Hydrogen Energy Education Program: The Power and the Potential."

The goal of this program is to develop a curriculum that motivates students to envision a world that utilizes a variety of energy sources, such as renewable energy, energy conservation and in particular hydrogen. The program is an opportunity for students, guided by teachers and supported by the partnership of Progress Energy and the Florida

Solar Energy Center, to step confidently forward into a new energy era. It will initially involve the following Florida schools:

- Nature Coast Technical High School -- Brooksville
- Polk Avenue Elementary School -- Lake Wales
- J.W. Mitchell High School -- New Port Richey
- Lakewood High School -- St. Petersburg
- Lake Howell High School -- Winter Park
- Durance Elementary School -- Orlando
- Tuscawilla Middle School -- Oviedo
- Oak Ridge High School – Orlando

Three teachers from each school are being invited to participate in the program. These interdisciplinary teams of teachers from the schools will participate in training facilitated by the Florida Solar Energy Center education staff. The teachers will review current curriculum and other information available on hydrogen, including H2 Educate, HOPE and High Energy Hydrogen to develop a unique curriculum that aligns with the Sunshine State Standards and their individual classes.

It is hoped that this program will serve as a model that could expand to other schools in the future. The goal is to help transition Florida to an economy that utilizes a variety of energy sources and technologies, including hydrogen.

Summary

While we are disappointed that the program funding will not allow completion of all activities originally proposed, we are very pleased that we were able to complete several important projects. The database will be very useful to students and faculty members looking for information on hydrogen courses and degree programs around the U.S. The various hydrogen educational programs held this year at FSEC have benefited a couple of thousand students, teachers and family members who participated. And the beginning of the hydrogen energy academy and summit will further develop educational programs in hydrogen energy.