

(16) Development of a Regional Hydrogen Technology Education Consortium (HyTEC)

Progress in Past Quarter and Current Status:

This quarterly report covers the period ending March 31, 2005. The project activities are continuing in collaboration with partnering institutions (UGA, USC and UF) according to the following TASK Matrix as shown in Table 1:

Table 1: HyTEC TASK Matrix

		NCATSU	UF	UG	USC
Task 1	University Courses				
	Hydrogen Energy Technology	x			
	Fuel Cells		x		
	Hydrogen Production, Storage and Transportation			x	
Task 2	K-12 Students and Science Teachers				
	Workshop Notes and Reference Materials	x		x	x
Task 3	State and Local Government Officials				
	Workshop Notes and Reference Materials	x		x	x
Task 4	End Users and Industry Groups				
	Short Course Notes in Power Point and Reference Materials	x	x	x	x
Task 5	General Public				
	Quarterly News Letter		x		
Task 6	Hydrogen Technology Demonstration				
	Fuel Cell Bus and Solar Hydrogen Production Unit		x		
	5-kW Fuel Demonstration Project	x		x	x

Task 1. University Courses (Status – ongoing)

During the previous period, a preliminary course outline was developed for a course on Fuel Cells and portions of the proposed course material were used in an existing undergraduate Energy Conversion course for student feedback. In this semester, the same material was tested at the graduate level in the course EML 6451 offered by the Mechanical and Aerospace Engineering department

Task 2. K-12 Students and Science Teachers (Status – ongoing)

Instructional materials on Fuel Cell and Hydrogen are being developed at NCA&T for high school students and science teachers. These materials are to be used in July 2005 for a Summer Institute.

Task 3. State and Local Government Officials (Status – ongoing)

At USC, Dr. Davis made a presentation in the Learning Center of the new West Quad on March 24, 2005, to faculty and students and to staff of the State Energy Office. The presentation, entitled “Fuel Cell at the Green Dorm,” described the educational program and data acquisition capabilities for the fuel cell. After the lecture the participants visited and examined the fuel cell.

Task 4. End Users and Industry Groups (Status – ongoing)

As part of our outreach effort, Davis made a presentation in the Learning Center of the new West Quad on March 31, 2005, to the Industrial Advisory Board of the National Science Foundation Industry/University

Cooperative Research Center for fuel cells. The presentation utilized materials from the March 24 seminar, but the emphasis was on the hydrogen production from natural gas in the reformer.

Task 5. General Public (Status – ongoing)

Electronic Newsletter - The newsletter production has been scheduled into the University of Florida editorial office activities for the next quarter.

Task 6. Hydrogen Technology Demonstration (Status – ongoing)

Tours of the Fuel Cell Laboratory and Fuel Cell bus were provided to about 15 members of the general public, as well as officials from Progress Energy and some fuel related cell companies. The Solar Hydrogen Production facility construction continues to make progress. Several equipment items such as the boiler, cooling tower etc. have been installed.

Plans for Next Quarter

During the next quarter:

1. preparation of the detailed fuel cell course will commence.
2. A newsletter for the general public will also be prepared with input from all the partners.
3. Additional tours and demonstrations will be performed.
4. Course materials for Summer Institute designed for students and science teachers will be finalized.