

X.7 Education Materials: Hydrogen Program Information Kit

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Subcontractors:

Argonne National Laboratory, Argonne, IL

NuZoo Media, Inc., Chicago, IL

Start Date: July 2004

Projected End Date: December 2005

Objectives

The materials developed during this project will help the DOE Hydrogen Program educate multiple target audiences, including the public, about the President's Hydrogen Initiative and the long-term benefits and near-term realities of hydrogen, fuel cells, and related infrastructure. It will help users to:

- Understand the concept and value of a hydrogen economy
- Recognize the near-term realities and opportunities of hydrogen and fuel cell technologies
- Develop an accurate picture of hydrogen safety issues
- Understand, where appropriate, their role in facilitating the transition to a hydrogen economy

Technical Barriers

This project addresses the following technical barrier from the Education section of the Hydrogen, Fuel Cells and Infrastructure Technologies Program Multi-Year Research, Development and Demonstration Plan:

- A. Lack of Awareness
Interest in hydrogen and fuel cell technology is increasing, but there remains a general lack of awareness of hydrogen as an energy alternative. Moreover, although world events have drawn new attention to national energy security issues, there is little consensus about the severity of today's environmental problems or linkages to fuel choice. With little awareness, understanding, or recognition of these issues, there is little impetus for change, and target audiences are less inclined to embrace new technology.

Approach

The materials to be produced during the course of this project include:

- Technology fact sheets (integral to the overall information package but can be used as stand-alone pieces)

- A PowerPoint presentation that creatively employs animation to enhance communication of information about hydrogen
- A CD containing the most current DOE documents relating to hydrogen planning
- An illustrated poster that provides an overview of the hydrogen economy
- An interactive CD that provides a “hands-on” learning experience in hydrogen as an energy carrier
- A self-containing packaging and storage kit to serve as delivery and storage mechanism for all other materials

Accomplishments

- Original target audience was the general public, focusing on secondary school children
 - An approach was developed
 - Several fact sheets were designed and written
 - Presented to DOE in early November 2004
 - A primary interface for the interactive CD and several secondary interfaces were developed and designed
 - Presented to DOE in early January 2005
- In late February 2005, the target audience was changed to the general public, the news media, and state and local government representatives
- The change in target audience has necessitated the development of an entirely new approach and design
 - Now in the process of redevelopment
 - Topics for fact sheets were presented to DOE in March and focused on the top ten facts people should know about the hydrogen economy; hydrogen production, delivery, and storage technologies; hydrogen safety; and applications
 - First redesigned fact sheet presented to DOE in April
 - All fact sheets are currently being written
 - The primary interface for the interactive CD has been redesigned and is being reviewed

Future Directions

Completion and delivery of the following is planned by the end of FY 05

- Stage 1 – Delivery planned by August 31, 2005
 - Technology fact sheets for use in-kit or stand-alone
 - A self-containing packaging and storage kit to serve as delivery and storage mechanism for all other materials
 - A CD containing the most current DOE documents relating to hydrogen planning
- Stage 2 – Delivery planned by December 30, 2005
 - An illustrated poster that provides an overview of the hydrogen economy
 - An interactive CD that provides a “hands-on” learning experience in hydrogen energy
 - PowerPoint presentation that creatively employs animation to enhance communication of information about hydrogen

Note: A hydrogen technology overview brochure was originally included in the project scope but was not funded during this period. If the project is funded in FY 06, delivery of the brochure will be in 2006.

Introduction

The materials being developed will help the DOE Hydrogen Program educate multiple target audiences about the long-term benefits and near-term realities of hydrogen, fuel cells, and related infrastructure.

New publications are being developed using the most recent existing information about hydrogen found on the Hydrogen, Fuel Cells & Infrastructure Technologies Program web site and from reports about hydrogen research being done at Argonne National Laboratory and other national laboratories and their subcontractors. The publications are designed to be easy to read, with content and style suitable for a general audience with a limited science/engineering background.

Approach

Our goal is to produce an information kit that is inviting, easy to use, and understandable for the general public. Using a graphical approach and easy-to-understand language, we discuss how hydrogen is produced, delivered, stored, used, and its value to the economy. The kit covers today's realities and challenges, and individual roles in the transition to a hydrogen economy. The variety of formats provides opportunities for interaction and education in media most accessible for the individual user. The "Lack of Awareness" barrier is overcome as the audience becomes informed.

Results

Key areas of information need have been identified and researched. The information gathered is the foundation for all elements of the information kit. The key areas to be presented are:

| Hydrogen Information Need-to-Know |
|--|
| Overview of the Department of Energy's Hydrogen Program and The President's Hydrogen Fuel Initiative |
| What Is Hydrogen and the Hydrogen Economy? |
| Hydrogen Production |
| Hydrogen Distribution and Delivery Infrastructure |
| Hydrogen Storage |
| Hydrogen Fuel Cells |
| Technology Validation |
| Hydrogen Safety |
| Glossary of Hydrogen-related Terms |

These topics are being covered in fact sheets and will be supported by photos, video, and illustrations in the remaining materials in the kit. The variety of materials being created enables users to approach the information in the format most comfortable to them.

FY 2005 Publications/Presentations

1. Project Status Presentation at the 2005 DOE Hydrogen Program Review, May 23-26, 2005.