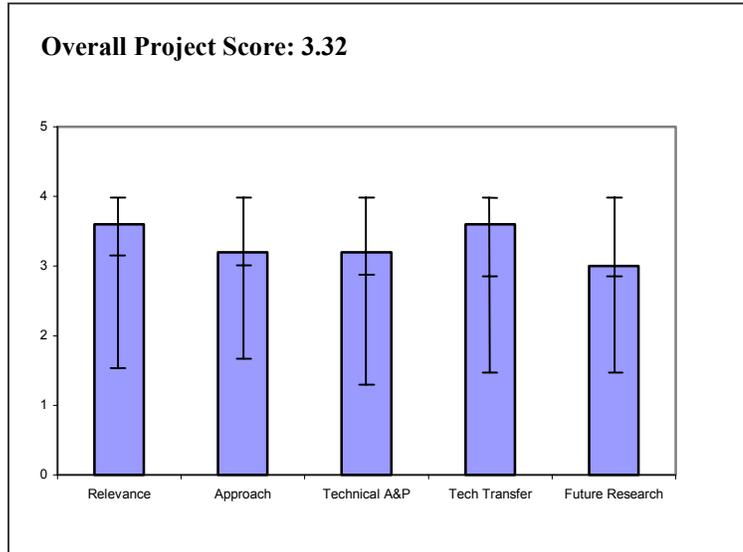


**Project # TV-8: Controlled H<sub>2</sub> Fleet & Infrastructure Analysis***Wipke, Keith; National Renewable Energy Laboratory***Brief Summary of Project**

Under this multi-year validation project the National Renewable Energy Laboratory (NREL) will assist DOE in demonstrating use of fuel cell vehicles and H<sub>2</sub> infrastructure under real-world conditions, using multiple sites, varying climates, and a variety of sources for hydrogen, including renewables. The primary activity over the last year was to support the DOE solicitation process and prepare for post-award work, while future activities will include analyzing data from vehicles and infrastructure to obtain maximum value for DOE and industry from this "learning demonstration."

**Question 1: Relevance to overall DOE objectives**

This project earned a score of **3.60** for its relevance to DOE objectives.

- Fits with the DOE Multiyear RD&D Plan.
- Good speaker.
- Good slide to define tech validation.
- New project.
- Involvement of strong programmatic and technical expertise from a National Lab is imperative for public acceptance of the overall Hydrogen Program.
- NREL is providing a confidence building role.
- Target calibration.
- Appropriate plan/analysis is critical if multimillion dollar investment in fleet vehicle program is to benefit community at large. This project is attempting to do that.

**Question 2: Approach to performing the research and development**

This project was rated **3.20** on its approach.

- Good ID of technical barriers and targets.
- Good upfront thinking/planning.
- Emphasis on safety.
- Launch of program and completion of solicitation activities through the award phase looks good.
- Time now to begin assessment of data and progress of successful projects.
- Composite data on "non-secure" side of firewall may reduce effectiveness/value of data.
- Factors identified for analysis seem well thought out.

**Question 3: Technical accomplishments and progress toward project and DOE goals**

This project was rated **3.20** based on accomplishments.

- Good description.
- Have met schedule so far.
- This is excellent, but a little early to predict success on FC fleets.
- NREL supports the DOE conduct of program.
- Major objective - tech support for RFP process completed.
- Met schedule/deliverable.

**Question 4: Technology transfer/collaborations with industry, universities and other laboratories**

This project was rated **3.60** for technology transfer and collaboration.

- Good use of coordination with systems integration group.
- Great slide on collaborations and interactions.
- A clear need to have public entity at nexus of program technical evaluation; NREL appears to be doing well at this job.
- Tech transfer process is well thought out but more detail on how data is handled would be interesting.

**Question 5: Approach to and relevance of proposed future research**

This project was rated **3.00** for proposed future work.

- Good slide.
- Detail is not readily available.
- Good feedback mechanisms.
- Procedures/process to insure feedback to technology/component development is very important.

**Strengths and weaknesses**Strengths

- Good speaker.
- Brings trusted public technical oversight to overall program that to some would otherwise appear to be government subsidy of private development.
- Better at this than say NETL or LBNL or ORNL which might appear to general public as not as trustworthy for development of a "scary" new technology.
- Well planned.
- Technology gap identification important.
- Well thought out, well articulated plan.
- Qualified PI.
- Excellent, well designed program management process.

Weaknesses

- Slides should have been updated to show firewalls.
- Editorial and interpretive techniques used behind firewalls unclear and seemingly subjective.
- Will reporting of composite data only dilute value to rest of community of the largest of all the H<sub>2</sub>/FC projects?

**Specific recommendations and additions or deletions to the work scope**

- Focus on analysis from fleet.
- Is GIS assessment critical at this time given funding constraints?
- What are contingencies for incomplete data, unresponsive program participants, equipment failures, etc?