

DOE's Hydrogen R&D Program

a presentation to the
**Hydrogen Technical and Fuel Cell Advisory
Committee**

**U.S. Government Accountability Office
May 13, 2008**

GAO Study on Hydrogen Fuel Initiative

- Hydrogen Fuel Initiative: DOE Has Made Important Progress and Involved Stakeholders but Needs to Update What It Expects to Achieve by its 2015 Target
 - GAO-08-305, January 11, 2007
- Objectives: Examine extent to which DOE
 - (1) has made progress in meeting HFI R&D targets;
 - (2) worked with industry to set and meet targets;
 - (3) worked with other federal agencies to develop and demonstrate hydrogen technologies.

DOE's Progress in Meeting R&D Targets

- Some target dates have been pushed back
 - Budget constraints
 - Technical challenges
 - Some targets require significant advances or breakthroughs
 - Production
 - Storage
 - Delivery
 - Fuel cell cost and durability
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- DOE has not updated its Hydrogen Posture Plan to assess the impact of delays in meeting some key target dates
 - Technology readiness
 - Cost

Developing Physical Infrastructure

- Likely to take decades
- Likely to cost billions of dollars
 - High risk
 - Likely to start with current infrastructure
- Codes and standards

DOE Has Partnered Well with Industry

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- DOE has begun to address stationary and portable technologies
 - Response to industry concerns
 - Too early to evaluate success of focus

DOE Effectively Coordinates with Other Federal Agencies

- Efforts with other federal agencies at the policy level have just begun
 - HTAC recommended in October 2006 that the IWG be elevated to require participation at the assistant secretary level or higher
 - DOE created the Interagency Task Force
 - GAO attended 1st meeting in August 2007
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Conclusions

- DOE has made important progress in meeting targets
 - DOE has a good planning process and involves industry and university experts
 - DOE has a good mix of fundamental and applied science
 - DOE focuses resources on high priority areas
 - DOE's targets are very ambitious
 - Hydrogen Posture Plan does not accurately reflect impact of budget constraints and technical challenges on targets
 - Infrastructure development will likely take decades and cost billions of dollars and will require sustained commitment of federal and industry resources
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Recommendation
