

Texas Hydrogen Highway

Fuel Cell Hybrid Bus and Fueling Infrastructure Technology Showcase

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This presentation does not contain any proprietary, confidential, or otherwise restricted information.

Project
tvp_04_hitchcock

Overview

Timeline

- Start: not yet initiated
- End:
- 0% complete

Budget

- Total Project Funding: \$382,776
 - DOE share: 100%
 - Contractor share: 0%
- Funding received in FY08 and FY09:
 - FY08: \$0
 - FY09: \$0

Barriers

- Technology Validation Barriers Addressed
 - Risk Aversion
 - Dearth of hydrogen fuel cell components and vehicles and hydrogen refueling infrastructure hardware
- Partners
 - Interactions/collaborations
 - University of Texas at Austin
 - Gas Technology Institute
 - Center for Transportation and the Environment
 - Houston Advanced Research Center
 - Project Lead
 - Texas H2 Coalition

Objectives

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 - To provide public outreach and education by showcasing the operation of a 22-foot fuel cell hybrid shuttle bus and hydrogen fueling infrastructure
 - To showcase operation of zero-emissions vehicle for potential transit applications
 - To advance commercialization of hydrogen-powered transit buses and supporting infrastructure



E-bus: 22-ft fuel cell electric battery plug-in hybrid bus in Austin, Texas

Gas Technology Institute
University of Texas at Austin

Hydrogen fueling dispenser



Milestones

Objectives	Milestones
To provide public outreach and education by showcasing the operation of a 22-foot fuel cell hybrid shuttle bus and hydrogen fueling infrastructure	<ul style="list-style-type: none">• Final bus prep and checkout• Route data collection, modeling and simulation• Support, start-up, and operation of fueling station• Over six months, conduct public outreach and education through bus and fueling station operation and performance evaluation• Mid-term inspection and evaluation
To showcase operation of zero-emissions vehicle for potential transit applications	<ul style="list-style-type: none">• Bus training for transit staff• Station training and follow-on activities• On-site education and outreach
To advance commercialization of hydrogen-powered transit buses and supporting infrastructure	<ul style="list-style-type: none">• Overall project implementation• On-site education and outreach• Hydrogen fuel bus transit plan for target county

Milestones/Timeline

Task/Month	1	2	3	4	5	6	7	8	9	10	11	12
Final bus prep and checkout	Active	Active	Active	Light	Light	Light	Light	Light	Light	Light	Light	Light
Route data collection, modeling, simulation	Active	Active	Active	Light	Light	Light	Light	Light	Light	Light	Light	Light
Bus training for transit personnel	Light	Light	Active	Light	Light	Light	Light	Light	Light	Light	Light	Light
Support, start-up, operation of station	Active	Active	Active	Light	Light	Light	Light	Light	Light	Light	Light	Light
Station training and follow-on	Light	Light	Active	Light	Light	Light	Light	Light	Light	Light	Light	Light
Fuel cell bus operation	Light	Light	Light	Active	Active	Active	Active	Active	Active	Light	Light	Light
Mid-term inspection and evaluation	Light	Light	Light	Light	Light	Light	Active	Active	Active	Light	Light	Light
On-site education and outreach	Light	Light	Light	Light	Light	Light	Light	Light	Light	Active	Active	Active
H2 bus plan for Fort Bend County	Light	Light	Light	Light	Light	Light	Light	Light	Light	Active	Active	Active
Project management (quarterly)	Active	Active	Active	Dark	Dark	Dark	Active	Active	Active	Dark	Dark	Dark

Approach

- First fuel cell vehicle and hydrogen fueling infrastructure in the State of Texas
- Outreach and education through showcasing of real world operation of vehicle and fueling technologies
- Data collection and modeling intended for additional potential transit applications in the state.

Technical Accomplishments/Progress/Results

- Project not yet underway, awaiting final approval from DOE
- Fuel cell bus and fueling infrastructure funded by non-DOE sources

Future Work

- Project kick-off
- Bus preparation
- Fueling infrastructure start-up and training
- Operations
- Outreach and education activities

Summary

- Fuel cell bus and fueling infrastructure funded by non-DOE sources
- Operation and data collection with fuel cell bus and fueling infrastructure in Texas
- Aimed at transit applications and fleets
- Multi-partner expertise for on-site project operations, fueling infrastructure, technical guidance, and management