

## **NTRD Program Disclaimers**

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**Texas Commission on Environmental Quality  
New Technology Research & Development (NTRD) Program  
Monthly Project Status Report  
GTI Project # 20284**

Contract Number: 582-5-70807-0001

Grantee: Gas Technology Institute

Date Submitted: October 10, 2006

Report for the Monthly period: September 2006

Starting Date: September 1, 2006                      Ending Date: September 30, 2006

Section I. Accomplishments *(Please provide a bulleted list of project accomplishments as well as a description of their importance to the project.)*

<b>Accomplishment</b>	<b>Importance to the Project</b>
GTI is in the final site selection process. The University of Texas, Center for Electro mechanics (UT-CEM) is a likely participant in the eventual deployment of this technology.	Identifying the final deployment site for the project is very important as it decide the application for the fuel cell vehicle and the amount of fuel that the fueling system needs to provide. It also will impact the configuration and the cost of the final system installation.
GTI and UT – CEM have met with fuel cell bus suppliers and are in the final process of making a selection of a vehicle supplier.	GTI and UT-CEM have visited two bus suppliers and will be visiting the probable supplier again in late October. CapMetro will attend the October meeting and a prototype bus will be test driven and evaluated for in-service use in Austin.
GreenField has completed design of the fueling station skid and container configuration.	The hydrogen compressor, purification unit, and gas storage tanks are at GreenField's offices in Dallas. Skid structural design has been revised and will be ready to submit to TCEQ in next month's report.
GTI has completed initial fabrication of the Steam Methane Reformer (SMR) hydrogen generation system	The system has been built and is being tested at GTI's lab in Des Plaines.

**Indicate which part of the Grant Activities as defined in the grant agreement, the above accomplishments are related to:**

<b>Accomplishment</b>	<b>Grant Activity</b>
Host site negotiations for station deployment	Task 1, Article 2.1.2 in the Project S.O.W.
Vehicle proposal evaluations	Task 2
Integrated fueling station engineering and design	Task 1
SMR design, fabrication and testing	Task 1, Article 2.1.1.1 in the Project S.O.W.

Section II: Problems/Solutions

<p><b>Problem(s) Identified</b></p> <p><i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i></p>	<ol style="list-style-type: none"> <li>1) GTI does not have sufficient funding to obtain a fuel cell vehicle without finding a partner to share the cost of the project.</li> <li>2) GTI has requested a no-cost time extension for this project to accommodate the time for identifying a new vehicle supplier and to accommodate unforeseen delays in fabricating the fueling system.</li> </ol> <p>These issues continue from last month's report.</p>
<p><b>Proposed Solution(s)</b></p> <p><i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i></p>	<p>GTI has identified supplemental federal funding through a new project partner to obtain a fuel cell bus vehicle that can operate as a "road-ready" vehicle in Texas.</p> <p>GTI and its Austin-based partners will jointly purchase and operate a fuel cell shuttle vehicle in Austin.</p>
<p><b>Action(s) Conducted and Results</b></p> <p><i>(Please describe the action(s) taken to resolve the problem(s) and its effect)</i></p>	<p>GTI has identified supplemental funding for the fuel cell vehicle. A partnering agreement is in the contracting process.</p> <p>GTI and its Austin-based partners (UT-CEM and CapMetro) will be visiting a "finalist" as the vehicle supplier in late October. This trip will be to assess the suitability of the fuel cell shuttle as an in-service vehicle for the Austin area.</p>

**Section III. Goals and Issues for Succeeding Period:** *(Please provide a brief description of the goal(s) you hope to realize in the coming period and identify any notable challenges that can be foreseen)*

- Continue preliminary work on the most likely deployment location and begin on-site permitting, gas supply, and operating groundwork.
- Generate a cost estimate for the deployment phase of the fueling station project
- Complete the construction of the SMR and the integrated station.
- Continue the fabrication and testing of the hydrogen generation system.



Date: 10-10-2006

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*Authorized Project Representative's Signature*

**J. B. Weeks, Associate Director,  
Hydrogen Energy Systems  
Gas Technology Institute**

**NOTE:** *Please attach any additional information that you feel should be a part of your report or that may be required to meet the deliverable requirements for tasks completed during this reporting period.*