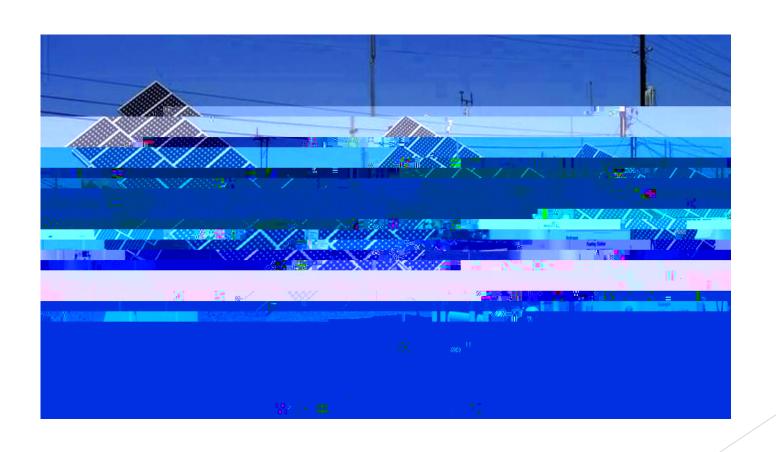
Hydrogen Filling Station and related renewable energy projects presentation

Center for Energy Research UNLV

Hydrogen Filling Station



Renewable Filling Station

In a joint project with the U.S. Department of Energy, the Las Vegas Valley

Conversion of Vehicles to Hydrogen Fuel

As part of this project, the Center for Energy Research converted two utility vehicles to hydrogen fuel:

The vehicle pictured below on the left initially used a gasoline-fueled internal combustion engine, which was converted to use hydrogen. The direct-injection method was used to pump hydrogen into the cylinder of the engine.

A Ford pickup truck also was converted to use hydrogen as a fuel.



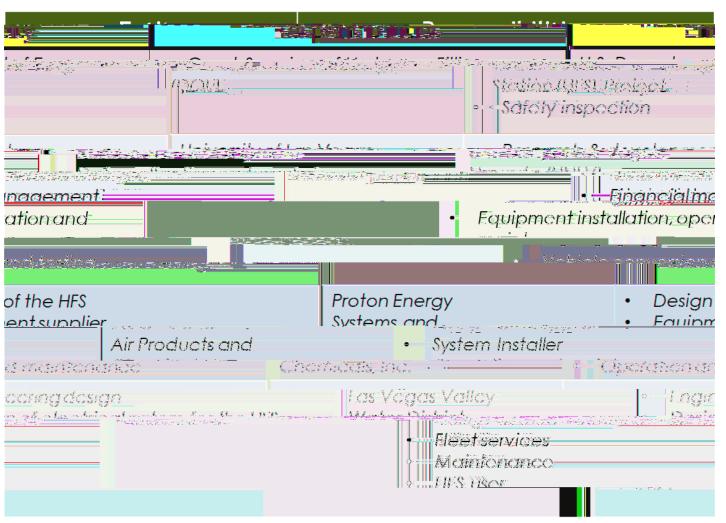
Hydrogen Generation

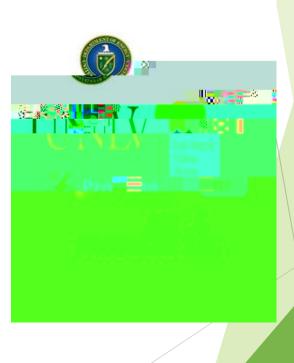
In addition, work was performed on various methods of hydrogen generation, including:

A photo-electrochemical electrolyzer cell to generate hydrogen

A **single-cell PEM electrolyzer**, developed to improve the performance of individual cells and cell stack by optimizing the fluid dynamics and heat transfer behavior inside the cell.

Sponsors and Project Participants (1 of 3)





Sponsors and Project Participants (2 of 3)





Sponsors and Project Participants (3 of 3)

