PROJECT OVERVIEW REPORT

1. Center Identifying Number
   FDU-RU4474

2. Project Title
   Dual-Drive Production Prototype Project

3. Internal Principal Investigator
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5. Project Description
   The project goal is to continue the development of fuel-efficient vehicle retrofits, using as much off-the-shelf technology as possible, thereby reducing the developmental engineering costs. Previously, the basic engineering work on a plug-in electric vehicle was initiated and completed. The aim was to create a plug-in electric vehicle with a range of 30-40 miles. Actual fabrication and installation of the kit on a 94 Chrysler Voyager began in January 2008 and was completed by May 2008. Rigorous field tests were conducted to ensure reliability and the vehicle has been put through over 200 cycles of testing. The reliability of the components used in the plug-in conversion enabled us to begin further engineering work to ascertain the appropriate type of gasoline-electric interface and interface methodology. Several alternatives including serial hybrids were considered but the most promising technology that seemed to emerge from the analysis was the Dual-Drive system. The project objectives of this study are:
   - Design and build a roadworthy dual-drive vehicle retrofit for a SUV or full size van
   - Install the retrofit system in a selected donor vehicle
   - Run systematic on-road tests to gauge reliability, performance and safety of the retrofit system

6. Dates and Budget
   Start date: 11/12/2008
   End date: 5/31/2009
   Total Dollars: $49,700

7. Keywords
   Hybrid, dual-drive, fuel efficiency, plug-in, alternate fuels