

Adaptive Stack with Subdivided Cells for Improved Stability,
Reliability, and Durability under Automotive Load Cycle
(Topic 5)

Plug Power, Inc.

- Funding

DOE Cost Share	Recipient Cost Share	TOTAL
\$999,404	\$249,854	\$1,249,258
80%	20%	100%

- **Project Description:** The objective of this collaborative effort is to develop a 1-kW prototype proton exchange membrane fuel cell (PEMFC) stack, based on existing, state-of-the-art materials and technology. The proposed parallel substack architecture employs a novel, subdivided cell configuration that also includes a radial flow field for optimum fluid dynamics. The unique cell design will form the basis for a simple and flexible platform, from which a diverse line of stack products can be tailored to meet the requirements of automotive, stationary, and other fuel cell applications. The proposed work will lead to increased PEMFC stack reliability and lifetime. The performance and durability of the 1 kW prototype stack will be tested under automotive load cycling conditions.
- **Timeframe:** 2 years, starting in FY07

Sub-Contractors

Institutions
3M
Entegris