

Water Transport in PEM Fuel Cells: Advanced Modeling, Material Selection, Testing and Design Optimization (Topic 2)

CFD Research Corporation

- Funding

DOE Cost Share	Recipient Cost Share	TOTAL
\$4,673,348	\$1,360,000	\$6,033,348
77.5%	22.5%	100%

- Project Description: CFD Research Corporation (CFDRC) proposes to develop, validate and demonstrate advanced simulation capabilities for water transport effects in polymer electrolyte membrane (PEM) fuel cells. A series of complimentary experiments, with in-situ and ex-situ measurements, will be conducted for validation of new models and for improvement of water management by selection and modification of key cell component materials. The usefulness of the model will be demonstrated by use in design and operating strategies to meet automotive drive cycle and freeze/thaw requirements.
- Timeframe: : 4 year project, starting in FY07

Sub-Contractors

Institutions
BCS Fuel Cells
Research Triangle Institute
ESI Group
Ballard Power Systems
SGL Carbon Group