



Welcome to 12th Annual SECA Workshop



Heather Quedenfeld

Division Director, Power Systems

Power Systems Division Funding Profile

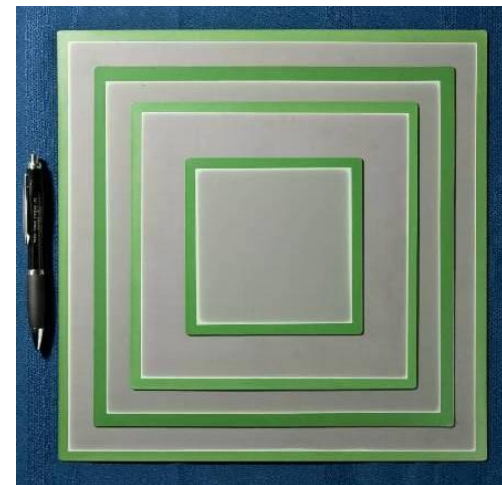
Total Number of Active Projects	79
Total Award Value	\$595,543,216
Total Government Share	\$430,030,758
Total Performer Share	\$165,512,458
	Data as of 7/21/2011

Technology Areas

Technology Area	Active Projects
Fuel Cells	33
Advanced Turbines	40
Industrial Carbon Capture and Sequestration – Innovative Concepts for Beneficial Reuse of CO ₂	 RECOVERY ACT 3
Small Business Initiative Research	 RECOVERY ACT 3



Delphi fuel cell module on truck



Versa fuel cell size progression

Advanced Turbine Program

45 Current Active Projects

(excluding NETL and Site Support)

Hydrogen Turbines

GE Energy-ARRA, SC/NY
Siemens Energy-ARRA, FL

Oxy-Fuel Turbines

Clean Energy Systems-
ARRA, CA

Advanced Research

Aero Heat Transfer

Ames Laboratory, IA
NETL, OR/PA/WV
ORNL, TN
Florida Turbine Tech., FL

Combustion

Georgia Tech, GA
LBNL, CA
NASA Glenn, OH
NETL, OR/PA/WV
Parker Hannifin-CDP, OH
Precision Combustion, CT

Materials

NETL, OR/PA/WV
NIST, CO (SNYA)
ORNL, TN

UTSR Program

Aero Heat Transfer

Ohio State, OH Ohio State, OH (SNYA)
Texas A&M, TX
U. Texas Austin, TX
U. North Dakota, ND

Combustion

Georgia Tech, GA Purdue U., IN (SNYA)
Penn. State U., PA U. Calif. Irvine, CA (SNYA)
Penn. State U., PA U. Michigan, MI (SNYA)
U. Calif. Irvine, CA U. Michigan, MI (SNYA)
Texas A&M, TX U. Texas Austin, TX (SNYA)

Materials

Louisiana State, LA Tenn. Tech, TN (SNYA)
Ohio State, OH U. Conn., CN (SNYA)
Stony Brook, NY U. N. Dakota, ND (SNYA)
U. Texas El Paso, TX U. Pittsburgh, PA (SNYA)
U. Calif. Irvine, CA

SBIRs

Innovative Cooling Concepts

Florida Turbine Tech., FL
Mikro Systems, VA

Combustion

Precision Combustion, CT

Manufacturing

Mikro Systems-ARRA, VA
Physical Sciences-ARRA, MA
Barber-Nichols, CO (SNYA)

Thermal Barrier Coatings

Faraday, OH
UES, OH

Fuel Cells Program (SECA)

34 Current Active Projects (excluding NETL and Site Support)

Industry Teams

FuelCell Energy &
Versa Power Systems
UTC Power & Delphi
Rolls-Royce

Core Technology Program

Cathodes

ANL*
Boston U.
CMU
Georgia Tech
LBNL*
MIT
Montana State
NETL
PNNL*

Interconnects & Contact Materials

Auburn U. - EPSCoR
NETL

Anodes & Coal Contaminants

NETL
WVU -
EPSCoR

Modeling & Simulation

NETL
Rolls-Royce - CDP

Materials, Testing & Manufacturing

NUWC
ORNL

Seals

Alfred U.
U. Cincinnati

Fuel Processing

NETL
Penn State U. - CDP

Innovative Concepts

CellTech
GE
NETL
NexTech
NuVant - CDP
TMI - CDP
U. Akron -
CDP

SBIRs

Cathodes

MSRI (SNYA)

Interconnects & Contact Materials

Faraday-
ARRA

Balance of Plant

FCE
R&D Dynamics

Materials, Testing & Manufacturing

NexTech

Seals

MSRI
Mo-Sci

Fuel Processing

Precision Combustion

Innovative Concepts

CellTech

SECA Workshop Agenda Overview

- **Three full days of Technical Presentations**
 - Questions and Dialogue encouraged
- **Keynote Speakers**
 - AEP, NETL Program, IGFC Plants, and Critical Materials
- **Poster Session with Reception**
- **Cathode Panel**



Special Thanks to the Project Managers

- **Robin Ames**
- **Rin Burke**
- **Maria Reidpath**
- **Travis Shultz**
- **Joe Stoffa**
- **Briggs White**

