RDECOM

US ARMY NATICK SOLDIER RD&E CENTER

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Natick Soldier Research, Development and Engineering Center

Dr. Marilyn M. Freeman
Director

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CONGRATULATIONS

Massachusetts ranks First in the Milken Institute's 2008 Technology & Science Index AGAIN!

NSRDEC Active CRADAs with Massachusetts Partners

Organization	Year	Statement of Work
• Fosta-Tek Optics	FY08	Evaluation of a Blown Sand Abrader (BSA)
• BioScale, Inc.	FY08	Methodologies for detection of pathogens in food.
• Metabolix, Inc.	FY08	Development of biodegradable polymers.
• Quercegen Pharma	FY08	Evaluation of Quercetin in fortified rations.
• Fosta-Tek Optics Triton Systems	FY08	Evaluation of optical abrasion resistant coatings.
• Pascale Industries	FY08	Novel fiber additives for use in a polymeric matrix.
• BAE Systems	FY08	Ergonomic optimization of night vision equipment.
• Reebok Intl.	FY07	Individual mobility and protection.
• Draper Labs	FY07	UAV software.
• UMASS Dartmouth	FY07	High performance textiles.
• Mass DTI	FY06	Foster growth of public/private partnerships.
• SJR Foods	FY06	Development of a shelf stable bagel.
• Foster Miller, Inc. Carleton Technologies	FY06	Evaluation and integration of a multi-man microclimate cooling unit.
• Triton Systems	FY05	Polymers & nanocomposites for protective eyewear.
• Battelle Institute	FY98	Development of advanced protective clothing, food, and organizational equipment.

Total: 15 Active CRADAs with Massachusetts Partners.

NSRDEC Active MOUs with Massachusetts Partners

Organization	Begin	End	Statement of Work
• Commonwealth of Massachusetts Executive Office of Public Safety	FY05	FY09	Identify technologies, products and services to address the needs of first responders and other public safety sectors.
• University of Massachusetts	FY05	FY08	Research and development relating to technologies for the individual Warfighter system.

Total: 2 Active MOUs with Massachusetts Partners.

Total Congressional add FY08 RDTE Funding $M

Sponsor	Recipient	Title	Amount
MA			
John Oliver (D)	Springboard Ceramic Injection Molding Inc.	Injection Molded Ceramic Body Armor	$0.386
NH			
John Sununu (R)	Nanocomp Tech Inc	Carbon Nanotube Armor Protection Sys	$1.545
Judd Gregg (R)	Warwick Mills Inc.	ChemBio Integrated Mat for Tent Structures	$1.545
John Sununu (R)			
ME			
Thomas Allen (D)	University of Maine	Modular Ballistic Sys for Force Projection	$3.863
Susan Collins (R)			
Ken Salazar (D - CO)			
CT			
Joseph Liberman (I)	Capewell Components	Deployment of Affordable Guided Airdrop Sys	$1.545
Christopher Dodd (D)			

Total New England $ 8.884

Total Congressional Funding $40.704

NEXT ENERGY
A MODEL for S&TB?

- **A 501(C)(3) ORGANIZATION**
- **STARTED WITH $30M SEED MONEY + FACILITY COSTS**

Hybrid of 3 Models
- business accelerator
- independent contractor
- broker/technical Asst provider

Similar to MA:
- Wind Blade Test Facility
- Adv Tech & Manuf Ctr
- Comm Venture Dev Ctr

Appears:
- Significant Investment
- Attempting to revitalize the city of Detroit
- Retain jobs in the auto cluster.

BOTTOM LINE:
- Interesting, but appears more complex then the proposal on the table.

NEXTENERGY

Economic Security through Energy Diversity

NextEnergy was founded in 2002 to advance the Alternative Energy Technology (AET) industry in Michigan. As part of its statewide economic growth mandate, NextEnergy is dedicated to fostering responsible growth of tomorrow's vital energy technology industry, while positioning Michigan as the nation's focal point for business investment in this rapidly expanding industry segment.

NextEnergy facilities and labs have been designed to converge Automotive, Electric Power and Defense applications into a singular, advanced knowledge base that puts NextEnergy at the forefront of global AET research and development.

Within its short history, NextEnergy has already:

- Secured commitments from around the world to establish businesses in Michigan through the use of NextEnergy's accelerator laboratory, technical services, and energy infrastructure
- Acquired millions of federal research dollars to advance energy technology development by Michigan-based businesses
- Led the development of world-class curriculum resources that establish Michigan's Colleges and Universities as national leaders in AET education
- Established several high-impact industry consortiums to tackle pressing technical and policy issues affecting the AET industry

With historic strengths in engineering and manufacturing, Michigan is poised to be at the center of the 21st Century's most vital emerging industry, Alternative Energy Technology. NextEnergy seeks to seed the ground with appropriate research, development, and education opportunities in order to foster marketable results and to create the jobs from which a new Michigan economy will grow.

On-site Facilities:

NextEnergy Center

- 45,000 sq. ft headquarters located in TechTown (Detroit's Entrepreneurial High-Tech Village)
- 18,400 sq. ft. accelerator laboratory houses 8 distinct R & D labs
- Auditorium, Training rooms, Demonstration and exhibition space

Flexible lab/education format accommodates diverse needs for research, development, engineering and prototyping

Services provided include:

- Business attraction and acceleration
- Collaborative research, development and technology validation support
- Technical consulting and program management
- Education programs
- Energy policy support

Microgrid Power Pavilion

Enables AET system integration through a world-class test and validation platform, for use by technology system developers, integrators and technicians

The Pavilion includes flexible test bays for the application and integration of on-site electrical power and thermal energy generation technologies, including:

- Fuel cells, internal and external combustion engine generators, and renewable power systems
- Thermal recovery and distribution (hot and chilled water system)
- Advanced communications and controls
- Multiple fuel sources (natural gas, hydrogen, bio and synthetic fuels)
- Modular design and construction provides cost effective installation and operation

Alternative Fuel Testing Platform

For advancing the development and application of hydrogen, natural gas, bio and synthetic fuels

- Test bays for validating and demonstrating emerging on-site hydrogen production systems in a real-world environment, from multiple feed stocks and end use applications
- Fully integrated into the Microgrid to provide a comprehensive "system of systems" approach for the advancement of alternative fuel and power generation technologies
- Separate fuel distribution and dispensing system for alternative fueled vehicle applications

While these early achievements provide a meaningful foundation for industry growth, NextEnergy can only succeed with the collaborative strength of key industry and institutional stakeholders, eager to build a major industry and partake of its success.