

Advanced Energy Job Stimulus Program

A key component of Ohio's program to create new jobs and encourage economic development, the \$150 million Advanced Energy Job Stimulus Program is designed to support new technology projects on a fast track toward commercialization. As part of the \$1.57 billion job stimulus package signed into law by Governor Ted Strickland in June 2008, the goal of the program is to employ Ohio workers in the advanced energy jobs of the future. The \$150 million advanced energy funding (over three years) seeks to increase the development, production and use of advanced energy technologies in the state, and is divided into two parts:

- \$66 million for clean coal technology projects administered through OAQDA's Ohio Coal Development Office (OCDO) (reviewed by staff, outside reviewers and the Technical Advisory Committee and approved by OAQDA); and
- \$84 million for non-coal-related projects in three \$28 million annual appropriations administered by OAQDA (reviewed by staff and outside reviewers, the Development Finance Advisory Council, approved by OAQDA and brought before Controlling Board for final approval).



Project Name:

InSeT Systems – Demonstration of an inertial sensor tracking system for monitoring of location of miners and equipment on a real-time basis

Project Location:

Beallsville, Ohio (Belmont County)

Applicant Information:

InSeT Systems LLC is the developer of the patented Inertial Sensor Tracking system that significantly aids rescue efforts in underground mines. The system was developed by the founders of InSeT in the aftermath of the Sago Mine disaster in January 2006 in West Virginia. The tracking system uses miniature inertial sensors, proprietary software and a wireless radio network to display and record the real-time location of miners working underground to within a few feet of their exact location.

Project Description:

The Inertial Sensor Tracking system developed by InSeT has been successfully demonstrated to determine the location of a miner in an underground mine environment. The company is moving forward to develop software that will enable the real-time monitoring of multiple sensors placed with miners and equipment. The system will include redundancy in the wireless radio mesh network to ensure system reliability in the event of a mine accident. InSeT is joined in this project by its principal partner, American Energy Corporation.

Until now, grant funds made available through the Ohio Coal Development Office (OCDO) almost entirely have been spent on overcoming the environmental challenges of using Ohio's high-sulfur coal. Efforts traditionally have been focused on such areas as emission control systems and clean coal technologies used in the conversion of coal to power or other products. However, working with mine safety experts, the Ohio Department of Natural Resources and the U.S. Mine Safety and Health Agency, OCDO staff determined that this advance in miner safety would provide significant benefit to Ohio coal mines. The potential to substantially improve mine safety in Ohio and across the nation, therefore, was deemed worthy of support under the Ohio Advanced Energy Job Stimulus Program.



Tracker

The unit worn by an underground miner to provide tracking and two-way voice and text communication

Funding Request: \$1,000,000

Approved Funding: \$330,586 grant

Total Project Investment: \$992,586

Jobs Created: 45-60 new full-time jobs over next three years

Jobs Retained: 4 full-time jobs retained

Technology to be Used: Inertial sensor tracking system

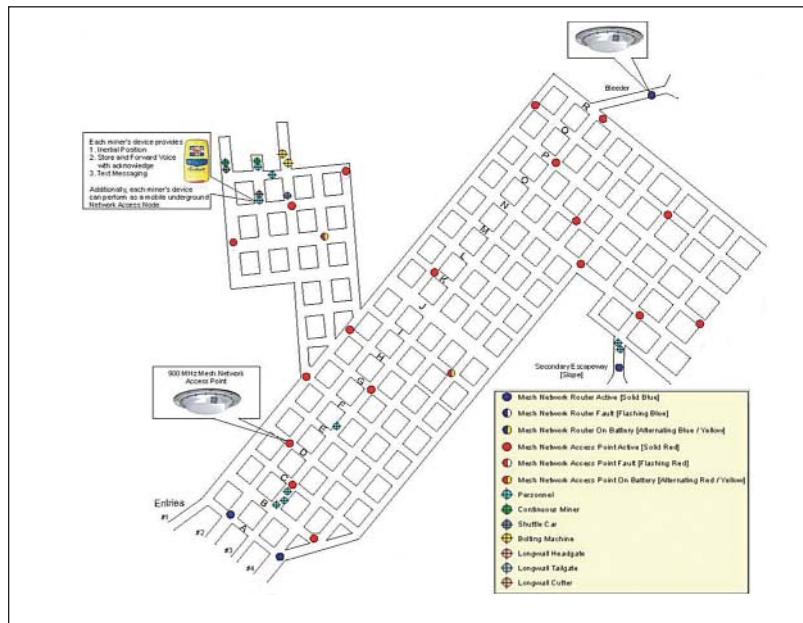
Primary Application of Technology: Increased safety of miners and equipment in underground mines

Customers to be Served: Mining operators in Ohio and beyond



Dome

The radio relay in an explosion-proof blast shield



A schematic drawing of a typical mine area with the InSeT system shown



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