



SustainMine

Ventilation On Demand

Purpose

The Ventilation on Demand (VOD) project will install, test and measure the efficiency of novel Ventilation on Demand technologies to decrease energy costs and increase productivity. This project will assist to increase productivity, decrease the environmental impact of energy consumption, and create jobs.

Value Proposition

For over 15 years, VOD has been touted as a way to reduce energy usage and potentially improve productivity by modifying the quantity and distribution of air in a mine based on where equipment and people are actually working.

The availability of tracking technologies and more responsive distributed control systems are making the implementation of the VOD theories economically possible. Claims of decreasing energy usage by 40% have been made - However are these savings possible in all mines? in all cases?

In August 2009, **CEMI was awarded \$4.25 million by Industry Canada** to evaluate the benefits of varying levels of VOD. In conjunction with funding by our industrial partners Vale, Xstrata Nickel and NRCan, two deep mine VOD systems are being commissioned and scientifically accessed.

One of the key goals of the project is to develop an **economic model** that can determine the specific benefits which VOD can contribute to specific mines, based on production schedules and the level of VOD being implemented.

Join our experienced team!



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Outcomes

- Develop a better business model that can assess the incremental cost/benefit of various stages of VOD
- Determine whether mobile equipment can transmit exhaust quality-related information to better define ventilation needs
- Evaluate sensor reliability and density
- Compare the relative costs of installing VOD at the outset or retrofitting an operation

Benefits

- VOD is about delivering underground mine ventilation to the specific area it is needed when it is needed and in the quantity it is needed
- Ventilation represents approximately 30 to 40% of the energy cost for a mine, we believe that savings of 1 to 5 million dollars could be achieved through the use of ventilation on demand techniques
- The project is anticipated to produce 450 person months of work, drawing on resources from the community and with the support of local engineering and manufacturing firms
- Various equipments installations, incl. control systems and monitoring sensors, will be purchased, installed and tested at two mines, and results will be analyzed and used for system improvements

Contact us for more updates.

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Visit our website to learn more about the benefits of becoming a CEMI member!

www.miningexcellence.ca/team/membership