

GIVING ENERGY WASTE THE SLPP: ONTARIO MINES PARTNER TO IMPROVE ENERGY EFFICIENCY AND SAVE MONEY

By Bryan Young

Do you have a leaky hot water tap in your home? A drop here, a drop there... it's no big deal, right?

Wrong! A leaky tap, at one drop per second, wastes 800 litres of water per month, not to mention the extra money you're spending to heat it. It all adds up to the drip, drip, drip of your energy dollars going right down the drain. Fixing it is just as easy as replacing a rubber washer that costs a few pennies.

In much the same way, the Ontario Mining Association (OMA) and Ontario Power Authority (OPA) have teamed up to fix another kind of small, steady leak that wastes energy and costs mines thousands of dollars a year. In this case, it isn't water but compressed air that is the energy-guzzling culprit.

The Sustainable Leak Prevention Program (SLPP) now under way at three northern Ontario mines will improve electricity efficiency, could help all mining companies save hundreds of thousands of dollars in their operations, and benefit other industries in Ontario that use compressed air in their operations.

Ontario's mining industry spends more than \$500 million each year for energy, and this ranges from 15 to 30% of operating costs depending on the type of mining operation. Compressed air systems, found in underground mines, are one of the largest contributors to electricity costs. Even small air leaks in these systems can increase electricity costs substantially by causing compressors to overwork, leading to wasted electricity and higher operating costs.

For example, a single tiny hole equal to 1/8" in diameter wastes air at a rate of about 12 litres per second. Even at the low rate of 4 cents/KWh, this leak alone can waste more than \$1,000 per year - and those in the industry know that most systems that use compressed air have many leaks. Some plants experience a leak rate equal to 20 per cent of total compressed air production capacity.



In a \$532,000 project, the Ontario Mining Association will oversee audits of compressed air systems at the Williams Mine in Hemlo near Marathon, CVRD Inco's South Mine in Sudbury and FNX's McCreedy West Mine also in Sudbury.

At the Williams mine, one of the largest gold-producing mines in Canada, Employee/Public Relations Coordinator Roger Souckey says, "Compressed air systems represent one of our greatest areas of operating and energy inefficiency." He notes, "The longer a leak goes undetected, the more compressed air and electricity we waste, and the less efficiently our



equipment operates. A key deliverable of the program will be establishing a trigger mechanism that will prevent leaks by telling us that preventive maintenance is required."

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competitive and reliable electricity system for the benefit of Ontario consumers, as well as to help build a "culture of conservation" in the province. Funding for 41 percent of the project comes from OPA's Conservation Fund, with the balance provided by the OMA and participating sites.

"It is our hope that this project will

further the cause of energy conservation both at work, and then at home, as Ontario's mining workforce becomes more aware of the importance of saving energy in Ontario not just to help the environment, but support industry through greater energy efficiency," says Peter Love, OPA's Chief Energy Conservation Officer.

The Conservation Fund was established to mobilize as many sectors of the Ontario economy as possible to embrace a culture of conservation. The Fund focuses on enabling conservation education and electricity reduction pilot projects. The key learning points from each of the Conservation Fund programs then shared across all sectors help spark similar programs in other sectors or to build pilot programs into full-scale initiatives.

The Fund needs help designing future programs. Partnering with groups like the OMA helps better promote energy efficiency and a culture of conservation in Ontario. These projects also help build a community of practice which will lead to better conservation programs for everyone.

After little more than a year, the Ontario Power Authority's Conservation Fund has provided \$2.5 million to 37 electricity conservation projects in a variety of sectors of the Ontario economy.

"In addition to identifying benchmarks and developing 'best practices' for the mining industry to help them remain competitive in a global economy, one of the key components of this program is also the promotion of a culture of conservation within the mining industry itself," says Project Manager Ivor da Cunha of LeapFrog Energy Technologies Inc.

"Repairing compressed air leaks in the mine is a cost-effective way to increase energy efficiencies and to ensure ongoing low-cost nickel production," says Dave Tomini, Divisional Energy Coordinator at CVRD Inco. "This initiative is in line with our continuing efforts to build a sustainable future."

Dave Secord, Senior Maintenance Coordinator at FNX McCreedy West mine says, "With training, and the management of this program, we are hoping to detect the problems right away and turn this into a cost saving in electricity as well as maintenance on our compressors."

Key findings of the audits will be presented to the OMA in March, with a final report submitted to OPA in May.

Bryan Young is the Manager of the Conservation Fund at the Ontario Power Authority. The Conservation Fund was established in 2005 to provide funding for action-oriented, sector-specific electricity conservation pilot projects that help build a culture of conservation in Ontario.

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