

Update

Latest news on the Blackstone Mine
Spring/Summer 2015



BLACKSTONE MINING COMPANY

A world without zinc?

Innovative solution to the drought

Blackstone files for US patent on zinc-to-hydrogen fuel process

BLACKSTONE MINING COMPANY plans to use its zinc-rich property in south-west Idaho as a proving ground for producing hydrogen fuel from zinc ore.



Location map

The project seeks to manufacture zinc oxide and zinc powder with zero emissions and without the use of fossil fuels. The Company will use solar and hydrogen energy to power a six-ton-per-day pilot plant, which it calls the Green Energy Machine (GEM™).

The facility will be energy self-sufficient by creating enough hydrogen from the closed-circuit vaporization of zinc to power the plant. Introducing water into the zinc vapor stream produces hydrogen and non-toxic zinc oxide, some of which will be dissociated into zinc powder using a solar-hydrogen reactor.

The patent pending process is expected to evolve into portable hydrogen generation systems, allowing the on-site production of gas for fueling stations and power generating facilities — the cleanest alternative to fossil fuels. GEM will also recover copper, silver, gold, and potable water as by-products from the use of hydrogen fuel for the plant.

Price could increase 60 percent in 2016

Leading experts issue dire warning on global zinc supply

GOLDMAN SACHS HAS LOOKED at the global supply of zinc and the picture isn't pretty. The firm's March 2015 research report predicts the world's zinc reserves will be exhausted within 20 years. Bloomberg reports the demand for zinc has exceeded output for the past nine years and the deficit will almost double next year. "It's all about supply," says Clive Burstow of London's Baring Asset Management. "It's simply that the big mines are coming off stream this year, and there's no big supply to replace their production; we're moving into an increasing deficit market."



Morgan Stanley estimates more than 1.2 million metric tons of the world's zinc supply will dry up by 2017, creating a market shortfall nearly twice the annual US consumption. Goldman Sachs Group and BNP Paribas are forecasting the per pound price to rise between \$1.25 and \$1.40 over the next 12 months. Zinc prices have already risen more than 7 percent in April trading.

Hydrogen produced from seawater can increase potable water supplies

Could zinc end California drought?

SCIENTISTS AT AMERICA'S LEADING UNIVERSITIES have successfully experimented with microbacterial fuel cells to make hydrogen and potable water from the ocean. Hydrogen is a clean-burning fuel that leaves behind only water as it combusts. Current methods of making hydrogen typically require fossil fuel to power production, defeating the purpose of clean and renewable energy. Blackstone's GEM™ zinc-to-hydrogen process requires *no fossil fuels*, thus slashing the costs of desalination while simultaneously producing hydrogen and potable water.

Substituting the Company's patent pending technology for producing hydrogen from zinc ore in place of bacteria accomplishes the same goal, but potentially on a much larger scale.



Extended drought conditions in California are pushing scientists to look for new methods of producing clean, potable water.