

Excerpt from VentureBeat, March 28, 2012

<http://venturebeat.com/2012/03/28/5-trends-in-oil-gas-technology-and-why-you-should-care/>

5 trends in oil & gas technology, and why you should care

Oil is in the news again. Last week, oil prices touched all-time highs due to Iranian export declines; the chief economist of the International Energy Agency said that high oil prices could cause an international recession. And whereas it looked like the State Department had put the breaks on the Keystone pipeline in November, President Obama announced last week that he was going to fast-track the construction of the southernmost portion of the project.

However, developments in oil and gas (O&G) are often overlooked in tech publications. It's easy to see how technology is reinventing retail, entertainment, telecommunications, and healthcare, but there's little discussion of tech's impact on the universe of companies focused on natural resources extraction, such as petroleum, natural gas, and mining companies, aka "extractive industries." The reality is, O&G is adopting a lot of new technologies, and a lot of funding is going into innovative companies that can help oil and gas companies work smarter.

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4: Minimizing the Harm of Hydrocarbons Cleantech investing may not be dead, but alternative energy is arguably in the "trough of disillusionment" in the hype cycle following recent scandals and the disappointing financial performance of public cleantech companies. **The WilderHill Clean Energy Index is down 55% since it was launched in 2004.**

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Three Opportunities for Innovators in Extractive Industries

Three additional areas have been relatively untouched by innovators but could be huge market opportunities:

1. Mineral extraction innovation. Only a fraction of venture

investment goes into energy technology, and only a small portion of that goes into hydrocarbon related technologies. Even fewer dollars go into supporting the mining and minerals industry. The sole venture-backed mineral company that comes to mind is ... , which produces Lithium; the sole strategic minerals VC I have heard of is ... ; which closed shop in 2002. As the recent high-profile **WTO trade case** suggests, minerals, especially rare earth minerals, are going to have an important impact on the economy. **The Economist** recently cited an article in Environmental Science and Technology that concluded that if wind turbines and electrical vehicles were to become as mainstream and widespread as they could be, the requirements for certain rare metals would need to increase by 700-2,600% over the next 25 years, whereas these supplies are only increasing by 6% a year.

2. Financial innovation to manage commodity volatility. Oil and energy prices are extremely volatile (see chart below). ... Energy price volatility is a huge problem for consumers and corporations and presents a huge opportunity for entrepreneurs.

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