

Obama's Electrification of America

Richard (Rick) Mills
www.aheadoftheherd.com

America's future energy course is being charted today because of the ramifications of peak oil, because cars pollute too much, because of global warming, because America wishes to end her dependence on foreign supplied energy and to be blunt... Americans need jobs.

"A new energy economy is going to be part of what creates the millions of new jobs that we need," President Obama.

Because of these reasons a whole new industry, a domestic automotive and industrial lithium-ion battery industry, is going to be built.

President Obama recently said, when announcing US\$2.4 billion in grants to accelerate the manufacturing and use of next-generation car batteries and electric vehicles, "I'm committed to a strategy that ensures America leads in the design and the deployment of the next generation of clean-energy vehicles. This is not just an investment to produce vehicles today; this is an investment in our capacity to develop new technologies tomorrow."

Obama's plan is to have one million electric cars on U.S. roads by 2015. JPMorgan predicts hybrid sales will reach 9.6 million cars three years later. Global Strategic Analysts predicts that the market for lithium-ion batteries is likely to grow at a compound annual growth rate of over 32% through 2010. With an increased demand for hybrid automobiles this growth rate will continue.

Commodity rules rule! Will electrification ignite a lithium boom?

Only time will tell. But with lithium batteries going to play a key role in the auto industry and eventually appearing throughout the electrical grid it's entirely plausible, in this author's humble opinion, that lithium is the next break out investment.

There's billions and billions of dollars, courtesy of the government's stimulus package, still to come (Washington has already handed out US\$8

billion in loans) for advanced battery technology R&D companies and battery manufacturers. The auto industry is gearing up to make its first real go at marketing plug-in vehicles for the masses. The start flag has dropped and the race to build lithium-ion batteries for vehicles has started.

If the US does not develop a lithium-ion battery manufacturing sector at home it may very well be shut out of the electric car business – he who makes the batteries will also make the cars. Lithium demand will skyrocket as more and more hybrids roll down the assembly line. Current processing potential is limited, making it vulnerable to market disruption. And limited supplies could mean big profits for lithium miners and producers.

It's extremely hard to believe that any politician or lobbyist would consider sourcing the needed supplies for Obama's Energy Revolution from offshore suppliers and risk the same foreign dependence as they have today with oil. Politicians will fight tooth and nail to avoid importing lithium or lithium-ion batteries.

Because there is so much money being thrown around and because lithium is the key ingredient to make these future electric cars viable it shouldn't come as a surprise to anyone if investors are smiling with glee over the prospects of a huge boom in the prices of their favorite lithium explorers and producers.

Will the Electrification of America become unplugged?

The U.S. Government Accountability Office, in a report to congress, warned that by switching from gas-powered cars to lithium battery powered cars the U.S. might simply "substitute reliance on one foreign resource for another."

"Politicians ... ran on a plank based on ending foreign oil dependence, and it is unlikely that voters will want to meekly transfer this dependence to lithium." Said the Council On Hemispheric Affairs, Washington, D.C.

Obama said this during his election campaign...."Finding the new driver of our economy is going to be critical. There's no better driver that pervades all aspects of our economy than a new energy economy...That's going to be my No. 1 priority when I get into office." President Obama

And it appears he's going to keep his promise...

http://www.whitehouse.gov/the_press_office/24-Billion-in-Grants-to-Accelerate-the-Manufacturing-and-Deployment-of-the-Next-Generation-of-US-Batteries-and-Electric-Vehicles/

It would be very difficult to overstate the importance of US sourced lithium in Obama's coming Electrification of America.

US Lithium Sources & Reserves

Lithium carbonate is needed to make the cathode material and the electrolyte used in a lithium battery, lithium Carbonate (Li_2CO_3) is produced from Lithium Chloride.

Economic concentrations of lithium are found in brines, minerals and clays in various parts of the world. Brines and high-grade lithium ores are the present source for all commercial lithium production.

Pegmatite's - coarse grained igneous rocks. The principal lithium pegmatite minerals are spodumene, petalite and lepidolite.

Continental Brines - The lithium contained within these salt lake brines comes mainly from the leaching of volcanic rocks, which then flows into a catchment basin.

Geothermal & Oilfield Brines

Hectorite Clays - hectorite is found in a number of areas in the western US.

According to the United States Geological Survey (USGS) US reserves of lithium total 760,000 tons. One kilogram of lithium equals 5.3 kilograms of the lithium carbonate used to make batteries.

South America accounted for 60% of world output of lithium in 2008, followed by Australia and China, which combined produced 30% of the total. Two-thirds of the world production was from brines and one-third from lithium minerals (used mainly in the ceramic and glass industry).

Nevada - the US's own Saudi Arabia of Lithium?

Clayton Valley is home to the only lithium producer in the United States. This plant extracts lithium from brines pumped from aquifers below the valley and has been in production since 1967. The plant is designed to produce 1.2 million kg of lithium per year and to date has produced an estimated 50 million kg of lithium.

In 1975, I.A. Kunasz of the American Institute of Mining, estimated the mineral endowment of Clayton Valley to be 750 million kg of lithium. A more recent study by Price, Lechler, Lear and Giles in 2000, suggests that significantly more lithium was released into the Clayton Valley catchment by the weathering of high lithium bearing rocks. They suggest that as groundwater enters the basin, it appears to be dissolving lithium minerals accumulated in valley sediment and is partially recharging the lithium content of the brine, while mining operations have been ongoing.

“Replenishment of brines comes from surrounding Rhyolite, which are the most lithium rich in the world. Brines in the area have concentrations as high as 1000 ppm. Concentrations as low as 166 ppm have been used in lithium brine pool extraction methods.” – Author

The following two junior companies have brine deposits in Nevada.

Rodinia Minerals Inc RM:TSX.v www.rodiniaminerals.com

TNR Gold Corp TNR:TSX.v www.tnrgoldcorp.com

Lithium also occurs in significant concentrations in the mineral hectorite, a trioctahedral smectite, lithium can be extracted from the clay through either a pyrometallurgical (roasting) or hydrometallurgical (solution) method.

Western Lithium Corp WLC:TSX.v www.westernlithium.com is working on a hectorite clay deposit in Nevada.

Conclusion

Lithium is one of the best ways to play President Obama's energy agenda. The power of the Office of the President of the United States will be backing the Eco-Energy Revolution and billions of dollars will be given out to

develop the technology behind the lithium-ion battery. This energy revolution is a serious investable long-term trend and we, as investors, have to take advantage of the opportunities being presented. We'd be smart to get in early, ahead of the herd, to take advantage of the coming global rush to electricity.

Currently lithium supply and demand are relatively in balance, however with the race to develop lithium-based batteries for an electric automotive industry there will be a shortfall of supply in the future.

New potential US based lithium supply side companies are coming and early strategic investors are already positioning themselves. It's not often in an investor's life they get the opportunity to invest in something so profound, something so huge it constitutes a sea change in the way we go about our daily business. With the full might of the Office of the President of the United States of America behind it the push for electrification is becoming a reality, and because of this new reality in America, lithium might just become the commodity of choice for investors.

If you're interested in the junior resource market and would like to learn more please come and visit us at www.aheadoftheherd.com

Richard (Rick) Mills

www.aheadoftheherd.com

rick@aheadoftheherd.com

Bio - Richard is host of www.aheadoftheherd.com and invests in the junior resource sector. His articles have been published on over 60 websites including - Wall Street Journal, 321Gold, Kitco, USAToday, SafeHaven, Stockhouse, The Gold/Energy Reports, Gold-Eagle and Financial Sense.

Legal Notice / Disclaimer This document is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment. Richard Mills has based this document on information

obtained from sources he believes to be reliable but which has not been independently verified; Richard Mills makes no guarantee, representation or warranty and accepts no responsibility or liability as to its accuracy or completeness. Expressions of opinion are those of Richard Mills only and are subject to change without notice. Richard Mills assumes no warranty, liability or guarantee for the current relevance, correctness or completeness of any information provided within this Report and will not be held liable for the consequence of reliance upon any opinion or statement contained herein or any omission. Furthermore, I, Richard Mills, assume no liability for any direct or indirect loss or damage or, in particular, for lost profit, which you may incur as a result of the use and existence of the information provided within this Report.

Rodinia is an advertiser on www.aheadoftheherd.com and Richard owns shares of the company.

