



VOICES ■ ***By Jean-Sébastien Lavallée***

Lithium is a key component of lithium-ion battery packs that power electric vehicles (EVs) and hybrid vehicles. A recent report from Pike Research forecast global sales of EV charging equipment will grow from 200,000 units sold in 2012 to nearly 2.4 million in 2020, representing a compound annual growth rate of 37%. With lithium a key component to the electric vehicle market, it is crucial that North America has adequate access to this critical element minus any geopolitical conflicts.

Credit Suisse has forecast a 10.3 percent annual growth in demand for lithium between 2009 and 2020. Global lithium demand has tripled over the past decade, and the global market price of lithium carbonate has tripled since 2001 to its current level of around \$6,500 per ton.

An industrial research report by David & Company forecasts that the global market for lithium-ion batteries will increase to \$43 billion by 2020 compared to an \$11 billion level in 2010 with the primary catalyst the increased demand for electric cars.

Most lithium today is mined in Australia, Argentina, and Chile. The largest known deposit is in Bolivia but political turmoil has hampered production. In the United States, there is a Nevada mine with geo-thermal powerplants that extracts lithium as a by-product near the Salton Sea in Southern California.

China remains the leading importer of lithium minerals and compounds and the leading producer of value-added lithium materials. My company's 100 percent-owned Rose Tantalum-Lithium Project, in the James Bay region in Quebec, is slated to start production by 2014 and is free of any geopolitical turmoil. We will be a valued global source for conflict-free Tantalum.

High purity lithium is required for a variety of electrical storage needs – from batteries that power electric and hybrid vehicles or provide large scale storage of renewable and conventionally produced power, to the batteries that power electronics including those found in smart phones, laptops, and gaming systems. Having proven a purity of 99.9 percent for our lithium makes our Rose Tantalum-Lithium project one of only five deposits globally that meet the rigorous specifications for lithium-ion batteries.

It is clear we have to ensure that North America does not lose the global war on being the leader in green energy solutions, which includes access to high quality conflict-free lithium. The war of the new millennium is being fought on a mon-

etary and labor scale across the globe, with China the market leader for rare earth metals with about 97% of the world's supply.

Next on China's plate is renewable energy integration. Ironically, as environmental pollution in the People's Republic of China runs rampant, the country has steadfastly focused on securing leadership status in the renewable industry. The Chinese government has set a goal of China securing 11.4 percent of its energy from non-fossil sources by the end of 2015, up from 8 percent today.

The U.S. government's commitment to supporting both the renewable energy and electric vehicle industries underlines the need for the rapid development of rechargeable batteries, and this has thrown the spotlight on domestic lithium supplies.

It is critical that North Americans understand the importance of assuming a leader stake in the alternative energy market. As my company possesses the key critical elements crucial to the electric battery sector, we are committed to being an active and valued voice in implementing change.

— *Jean-Sébastien Lavallée, PGeo, is President and Chief Executive Officer of Critical Elements Corp., www.cecorp.ca*

