

November 13, 2012

California Energy Commission
 Dockets Office, MS-4
 Re: Docket No. 12-ALT-2
 1516 Ninth Street
 Sacramento, CA 95814-5512

California Energy Commission
DOCKETED
12-ALT-2
 TN # 68556
 NOV. 19 2012

Simbol Materials urges the California Energy Commission to support the development of in-state, clean production of lithium and other components vital to powering the batteries of Zero-Emission Vehicles in your 2013-14 AB 118 investment plan.

Battery components key link in EV value-chain

California leads the nation and the world in climate change policy enabled in part by advancing electric vehicles (EV) and other zero emission technologies. Further gains remain at risk due to the high cost of electric vehicle batteries despite billions of dollars in capacity investment¹. Even boosting electric vehicle battery production by a factor of 10 is estimated to only reduce electric vehicle battery costs by an estimated 30-40 percent². Breakthroughs are needed in the electric vehicle value chain that is at the heart of the AB 118 investment plan.

Battery components represent a significant leverage point toward this objective. Not only are lithium battery components the active ingredient that power electric vehicles, they also represent a significant cost of electric vehicle batteries (figure 1)³. The U.S. and California are further dependent on foreign sources of lithium that is dominated by three countries that control 85% of global supply⁴. While there is plenty of lithium in the world today, demand for electric vehicles is projected to quickly exceed lower-cost lithium supply (figure 2), further adding to electric vehicle cost pressures. These and other factors threaten to undermine California's ability to meet its clean air goals through expanded Zero-Emission Vehicle use.

Fig 1 - Electric Vehicle battery cost breakdown

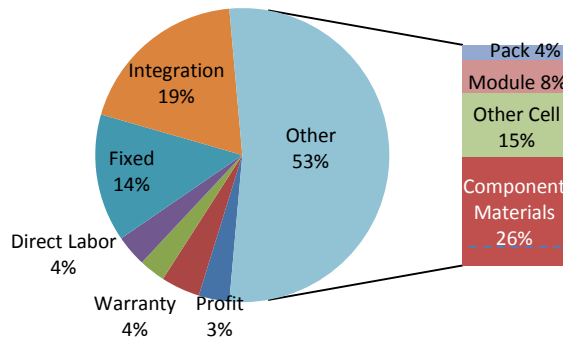
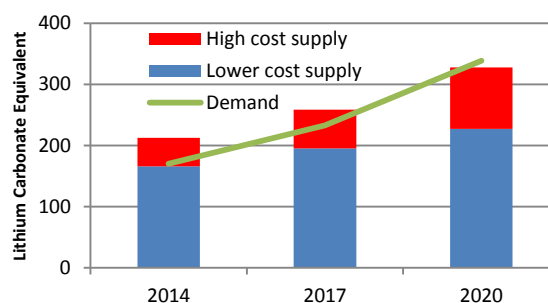


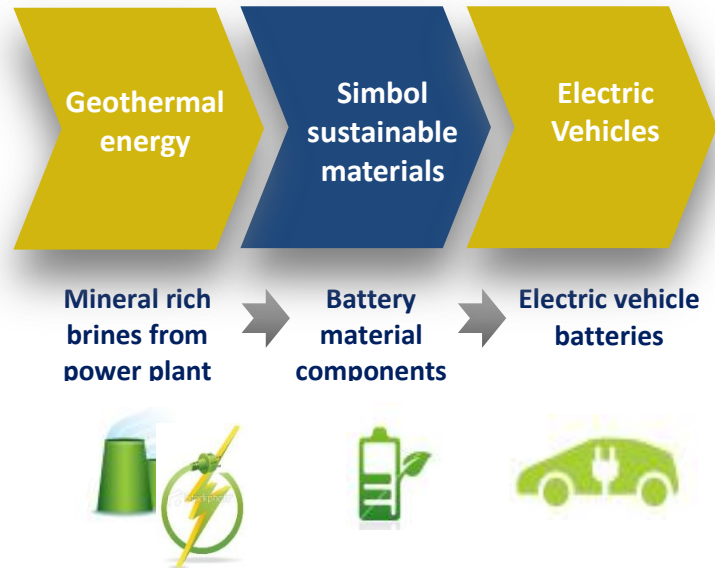
Fig 2 - Lithium Supply and Demand



California solution

Fortunately, California is blessed with several leading edge clean-technology companies focused on battery material component breakthroughs.

Simbol Materials is a California-grown and -based clean technology company which has created an environmentally-safe process to produce lithium, manganese, and other battery material components out of the brine from existing geothermal power plants in California's Imperial Valley. Simbol is leveraging a renewable energy source to create the clean energy battery components needed to power California's zero emissions electric vehicle future.



Simbol is a key enabler to realizing a competitive and viable electric vehicle industry in California and across the world. Each Simbol plant will:

- Produce sufficient lithium for about 800,000 electric vehicle batteries per year,
- Directly employ 90 full-time workers per plant in California's Imperial Valley, an area with the state's highest unemployment rate, and,
- Reduce the cost of California's renewable energy by providing a royalty to the geothermal power plant for mineral extraction, improving the competitiveness of California's electric vehicle ecosystem.



Simbol Materials urges that you consider incentivizing the clean production of lithium and other components necessary for achieving California's Zero-Emission Vehicle goals through the 2013-14 investment plan. Grants and financing from the AB118 investment plan provide a vital signal to the private sector needed for capital raising and bridging the second valley of death. California has a historic opportunity to ensure California sourced and produced battery material components empower our Zero-Emission Vehicle future, in environmentally responsible manner, while creating the jobs needed to sustain California's leadership in the clean energy economy and climate change.

Sincerely,

Sincerely,


 Paul M. Gutwald
 Vice President, Simbol Materials

¹ Hirsch, J. JD Power study: Electric vehicle economics don't pencil out, Los Angeles Times, November 8, 2012

² Department Of Energy. *One Million Electric Vehicles By 2015*. February 2011 Status Report

³ Argonne National Laboratory, *Modeling the Performance and Cost of Lithium-Ion Batteries for Electric-Drive Vehicles*, September 2011

⁴ U.S. Geological Survey, *Mineral Commodity Summaries 2012*, January 24, 2012