

Lithium, a strategic issue for tomorrow

There are more and more consumers using portable devices. Those need to be powered by a self sustained energy source. Even if electronics is now consuming less and less energy for a given task, the power of the whole electronic device increases canceling partly or completely the benefit carried out. Progress in the field of the batteries is slow but regular. Currently, Li-Ion technologies are the most powerful in terms of energy density, cost and easiness even if there are some security issues with some of the technologies.

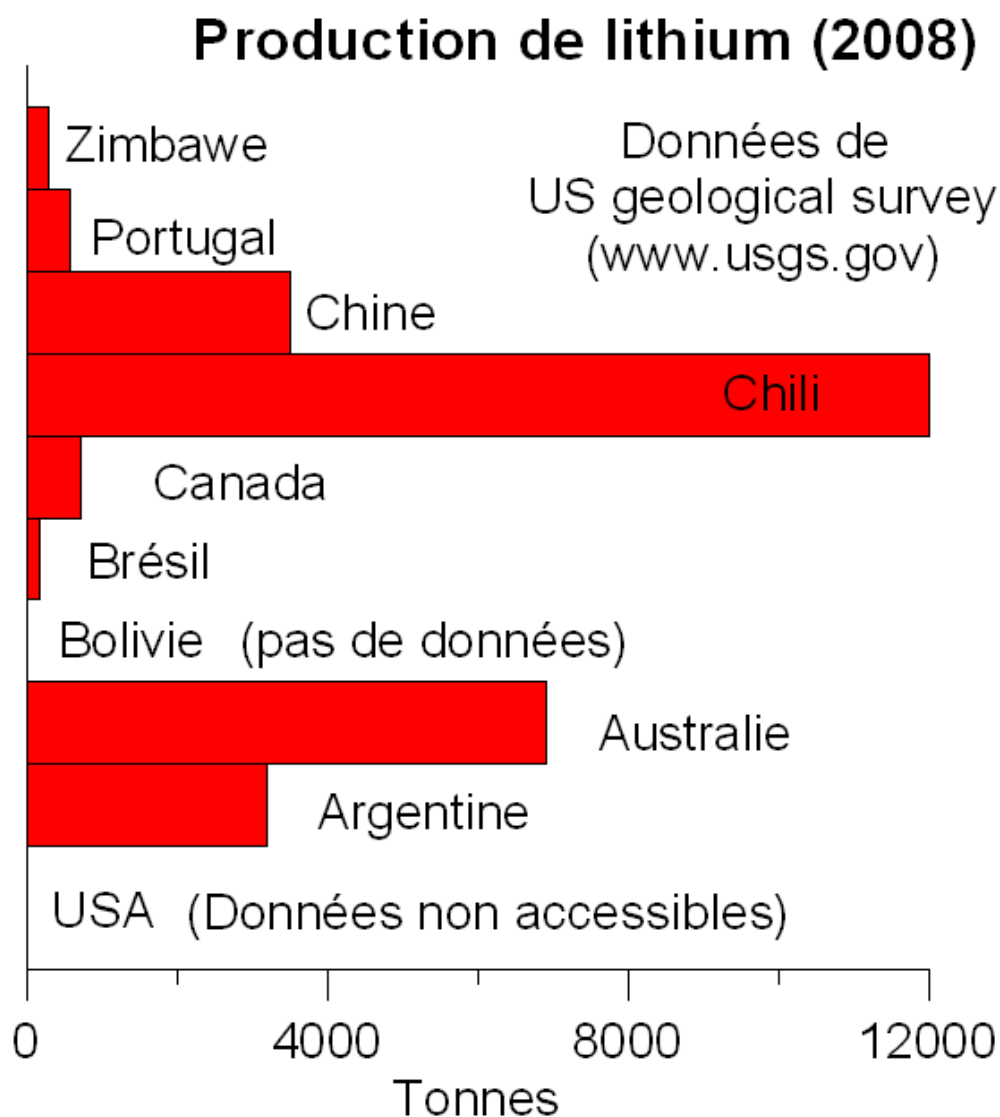


Figure 1

The development of plug-in vehicles and electric vehicles will require manufacturing more and more batteries. Most of them will use battery based on the Li-Ion technologies which offers a mass and volume energy density better other ones like the NiMH batteries (used for example in the Toyota Prius, an autonomous hybrid vehicle which does not need reloading on the grid). There will be soon more than a billion four-wheeled vehicles to which should be added two-wheeled vehicles. The question where to get lithium is therefore a serious issue. Lithium will have, anyway, to be recycled. Figure 1 shows the countries producing lithium in the world and the 2008 production (data from the US geological survey). The data of some countries are not available but their name is listed. Figure 2 shows the 2008 nreserve base in various countries. On the whole there is almost 14 million tons of accessible lithium.

Réserve de base de lithium (2008)

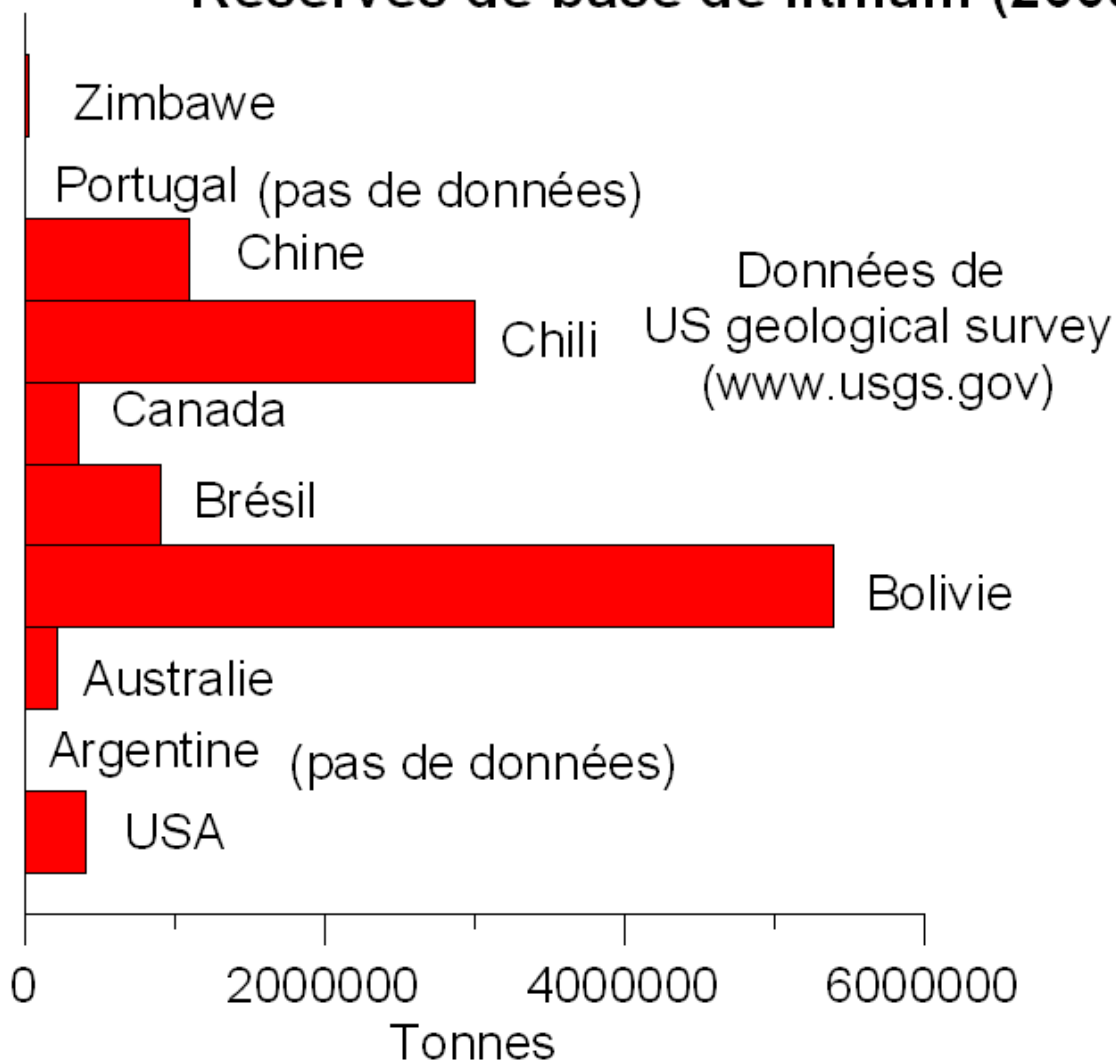


Figure 2