Lithium demand is surging but soon supply should catch up

The first wave of the lithium boom has come and gone. This saw tremendous gains for early investors who got in before 2016 and rode the wave all the way through to the end of 2017. Then in 2018 we have had endless negative reports on the sector, many of which seem miss-informed or plain wrong. The underlying theme is that many groups are totally underestimating the speed of change towards electric vehicles, and hence the surging lithium demand.

By way of example many see the EV sector as growing slowly, when in reality global electric car sales grew by 58% last year, and by 59% in Q1 2018. The number of EV models available is set to jump from 155 at the end of 2017 to 289 by 2022. Another sign demand there is the 30 new lithium-ion gigafactories on the way.

Lithium demand

My lithium demand model based on some reasonable assumptions such as 15% EV penetration by the end of 2025 (China already hit 3.7% in April 2018, and global EV penetration should exceed 2% in 2018), forecasts Lithium Carbonate Equivalent (LCE) from Electric Vehicles (EVs) to reach 1.1mtpa by the end of 2025. By way of a comparison in May last year Roskill tripled their forecast for LCE demand to ~1mtpa by 2026.
Roskill lithium demand forecast ~1Mt LCE by 2026

The key to understand is that demand is not just from booming electric car sales. There is plenty more demand from other EVs – e-buses, e-trucks, e-ships and e-boats, e-bikes, soon e-planes, the energy storage and electronics sectors.

For now e-buses especially in China have been a huge demand driver for lithium. Soon we will have e-semis and all kinds of electric trucks. Just this last week Daimler announced two new electric trucks for the US market to take on the Tesla semi that was slated for 2019 production. A full size electric semi-truck will need about 10-16 times more batteries (and hence lithium) than an electric car.
Daimler’s new electric semi truck set to go into production by 2021

**Lithium supply**

Meanwhile lithium supply at the mining level is responding to the surging demand picture described above. In 2018 we will see four new lithium miners become producers – Tawana Resources NL, AMG Advanced Metallurgical Group, Altura Mining Limited and Pilbara Minerals Limited. This will certainly boost lithium spodumene supply; however most industry experts see a shortage of converting capacity.

In any event the boosted 2018 lithium supply should bring the lithium demand/supply situation back to a more balanced level, and some moderation in lithium prices (especially China lithium spot prices). In 2019 we are likely to see some expansion from existing lithium miners to meet the demand surge, and by 2020/2021 some new lithium juniors such as Lithium Americas Corp., Bacanora Minerals Ltd. and some others like Nemaska Lithium Inc., A.I.S. Resources Limited, Neo
Lithium reach production.

We may also see further consolidation in the sector such as the SQM/Kidman joint venture deal. New lithium processing plants are also on the way, such as the Tianqi/Albemarle Kwinana facility in Western Australia currently under construction. SQM/Kidman also recently announced plans for a new Kwinana lithium processing facility.

In conclusion, EV uptake and lithium demand will be a lot stronger than what many currently think. Due to surging lithium demand the supply response has been very strong. This should mean that new lithium supply should be able to keep up with demand from now to 2020. We may see periods of small over or under-supply, and the LCE contract price range between US$12,000 and US$20,000/tonne. Currently it is at US $16,400/tonne. For investors this will mean the lithium miners that can expand production, and the juniors that can make it to production should still reward investors very well. As we move further into the new EV and energy storage world the lithium miners sector should have an excellent one to two decades ahead.