This is a message that has started resonating with miners, too, as the global electric vehicle (EV) revolution accelerates, highlighted by Tesla becoming the world’s most valuable automaker.

The changing sentiment has been highlighted by an uptick in listed lithium miners’ market valuations, despite the coronavirus pandemic.

‘Sentiment has turned a corner, with analysts pointing to a growing supply deficit emerging on the back of automakers’ EV plans, and the enormous “green” investments announced by governments in Europe and Asia,’ says Sayona Mining’s Managing Director, Brett Lynch.

‘New lithium projects will be essential to support this increasing demand, and Australian miners have shown their ability to deliver wherever they operate.’

In July, US EV maker Tesla overtook Japan’s Toyota Motor to become the world’s most valuable automaker, with its market value exceeding US$200 billion. This was despite Toyota selling around 30 times more cars last year and with revenues 10 times greater.

Roskill analyst Jose Lazuen comments, ‘Would investors put their money into companies that invest into a clean and electrified future, or in maintaining a status quo that will eventually be swept away by regulators?’

Roskill expects manufacturing capacity to reach nearly three million plug-in vehicles by 2022, including not only Tesla vehicles, but those from General Motors, Toyota, Volkswagen and others.

While passenger EV sales are expected to decline in 2020 to 1.7 million compared to last year’s 2.1 million, Bloomberg New Energy Finance sees sales reaching 8.5 million by 2025, 26 million by 2030, and 54 million by 2040.

**EUROPEAN INVESTMENTS**

Europe has been leading the charge, eclipsing China in its EV investments and unveiling a €750-billion (A$1.2 trillion) economic recovery plan focused on clean energy.

The continent has seen rapid growth in its planned lithium-ion battery production capacity, with its global share expected to reach nearly 15 per cent by 2024, overtaking the United States and Asia (excluding China).

The European Union’s internal market commissioner, Thierry Breton, says the grouping would need ‘60 times more lithium by 2050’ to meet its climate goals.

France, Germany, Italy and the United Kingdom have all recently announced plans to incentivise EV production, including increased vehicle subsidies and charging stations.

Battery ‘gigafactories’ are also being rolled out across Europe to support the industry’s growth.

Analysts Benchmark Mineral Intelligence (BMI) have estimated that 158 EV battery gigafactories are in the pipeline through to 2030, more than double the 67 currently in operation, with July showing the largest increase to date.
BMI expects the industry will need two million tonnes of lithium carbonate equivalent (LCE) by 2028, a significant rise from the estimated 300,000 tonnes produced in 2019.

Both the International Energy Agency and World Bank have urged increased production of battery minerals, including lithium, cobalt and rare earths, to support clean energy targets.

According to the World Bank, production of graphite, lithium and cobalt may need to expand by more than 450 per cent by 2050 (compared to 2018 levels) to meet demand from energy storage technologies.

While the demand forecasts continue to rise, shelved expansion plans have crimped output. A lack of battery-grade lithium supply is a particularly urgent issue for EV makers.

‘If every EV company took their 2023 plans and went to the lithium market today, they’d probably only get about 15 per cent of their needed supply of lithium,’ Paul Graves, Chief Executive of lithium producer Livent Corp, told Reuters.

**AUSTRALIA’S OPPORTUNITY**

Critical minerals, such as lithium, cobalt, manganese and rare earths, offer Australia a number of opportunities, including supporting the post-pandemic recovery, diversifying commodity exports and contributing to global renewable energy, according to a 28 July report by ANZ Research.

‘The renewable energy transition relies on critical minerals as components in wind turbines, solar panels, energy storage, electric vehicles and charging infrastructure. As countries work towards their emissions reduction targets, demand for these minerals is set to rise exponentially over the longer term,’ the report said.

The report noted that Australia is the largest producer of lithium and rutile, and is one of the top three producers of manganese, ilmenite and rare earths, with significant global reserves of these minerals, as well as tantalum, cobalt and vanadium.

In 2019, Australia produced 55 per cent of the world’s lithium (mostly as spodumene concentrate), becoming the biggest exporter with production of 208,000 tonnes of LCE, according to the Office of the Chief Economist.

**GLOBAL IMPACT**

Australian miners are also making an impact on the global stage.

In Argentina, Lake Resources plans to transform the lithium brine industry with a sustainable, direct extraction technology developed by its US technology partner, Lilac Solutions. Lilac’s pilot plant module in California has successfully produced a 99.9 per cent purity lithium carbonate using its ion exchange process.

‘The Lilac process offers a sustainable solution since it avoids any mining, with virtually all the water (brine) reinjected into the aquifer. This is a far better outcome for local communities and the environment,’ says Lake’s Managing Director, Steve Promnitz.

‘Tier 1 EV and battery makers are increasingly seeking responsibly sourced materials in their supply chain, and this, together with the product quality, is driving demand for our high-purity lithium.’

Meanwhile in Canada, Sayona’s Lynch envisages developing a lithium hub in Quebec centred on its flagship Authier project, seeking to supply the North American battery market, including Tesla.

In addition, the Australian company is bidding for North American Lithium, which has an established mine and concentrator. It aims to become a world-scale producer by combining North American Lithium with its nearby Authier and emerging Tansim projects.

‘The opportunity is enormous for Quebec, which is the most economical, strategic and green supplier of lithium to the United States,’ Lynch says.

‘We look forward to bringing Australian know-how to help cement Quebec’s position as a leader in this industry of the 21st century.’

With such ambitious plans, Australia’s place in the global clean energy revolution appears assured.