

The Top 5 Lithium Development and Exploration Companies for 2021

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The electric vehicle boom continues to accelerate in 2021. Global electric car sales for May 2021 were up 199% YoY reaching [6.6% share](#). Europe sales rose 158% YoY reaching 16% share, China sales rose 146% YoY reaching 12% share. Global electric car sales are forecast to grow as much as 10x this decade, a statistic that is been helped by Europe's recent announcement to effectively [ban emission producing cars from 2035](#), and strictly limit the allowable emissions from 2030.

As a result of the EV and energy storage boom, lithium demand is forecast to grow [11x](#) this decade. More recently the International Energy Agency (IEA) [forecast](#) lithium demand to increase between 13x (low scenario) and 42x (high scenario) from 2020 to 2040. While existing lithium producers can expand supply new lithium miners will potentially be needed to fill the supply gap, particularly from 2025 onward.

Here are five lithium development and exploration plays to consider buying now and holding this decade.

1. Sigma Lithium Resources Corp. (TSXV: SGMA | OTCQB: SGMLF)
2. Neo Lithium Corp. (TSXV: NLC | OTCQX: NTTHF)
3. Critical Elements Lithium Corporation (TSXV: CRE | OTCQX: CRECF)
4. Global Lithium Resources Limited (ASX: GL1)
5. Lithium Energy Limited (ASX: LEL)

Sigma Lithium Resources Corp.

Sigma Lithium 100% owns the advanced stage lithium spodumene Grotas do Cirilo Project in Brazil. The [January 2019 Resource update](#) for the Grotas do Cirilo Project resulted in a resource estimate of Measured and Indicated 45.7 million tonnes @ 1.38% Li₂O and Inferred of 6.6 million tonnes @ 1.34% Li₂O. Sigma Lithium's Stage 1 Xuxa deposit (part of Grotas do Cirilo Project) has a mining permit, pilot plant, and has [sold all Stage 1 off-take \(220ktpa\) to Mitsui](#). Sigma Lithium is currently working to finalize the Xuxa production complex design and EPC for construction. Sigma has produced a PEA for both Stage 1 and Stage 2, and when combined resulted in a [pre-tax NPV8% of US\\$844M](#). Stage 1 funding has been arranged and is expected to close soon, subject to due diligence.

Stage 1 lithium production is forecast to begin in H2 2022, Stage 2 to follow about 1-2 years thereafter, then potentially a Stage 3 after that. Sigma Lithium trades on a market cap of C\$598 million (~US\$472 million). One of the very best near term lithium producers.

Sigma Lithium's proposed layout for Stage 1 and 2 mine planned to produce 440,000 tpa spodumene (66,000 LCE)



Source: [Sigma Lithium](#)

Neo Lithium Corp.

Neo Lithium 100% owns the entire salar with their Tres Quebradas (the “3Q Project”) lithium brine project in Argentina, covering 160Km². The 3Q Project has high grade lithium brine (3rd-4th highest globally) with extremely low impurities (lowest globally). The 3Q Project is [advanced with pilot ponds already constructed](#) and a lot of infrastructure in place.

The updated PFS resulted in a post-tax NPV8% of [US\\$1.14 billion](#) and post-tax IRR of 49.9%, with a 35 year mine life. The PFS was based on an initial 20,000t pa lithium carbonate production and has a CapEx of US\$319 million and OpEx of US\$2,914/t lithium carbonate. The EIS is currently under assessment with results due out soon. The FS is underway and is due out in [Q3, 2021.](#)

Contemporary Amperex Technology Ltd (CATL) (China's largest battery manufacturer) is a strategic 8% equity partner with board representation and pre-emptive rights. This bodes well for funding the project.

Neo Lithium trades on a current market cap of C\$421 million (US\$332 million). I rate them as one of the best lithium near term producers, with a potential 2023 start-up for production. You can read more in my article [here](#).

Critical Elements Lithium Corporation

Critical Elements is developing their 100% owned Rose lithium spodumene project in Quebec, Canada. Critical Elements also own several other projects with potential for lithium, copper, nickel, zinc, lead, gold, silver, rare earths, and platinum group elements (PGE) as you can read [here](#).

The November 2017 Rose Project Stage 1 [Phase 1 Feasibility Study](#) (based on an average production of 186,327t pa of chemical grade lithium concentrate and 50,205t pa of technical grade lithium concentrate) resulted in a post-tax NPV8% of C\$726 million with a post-tax IRR of 34.9%, and a CapEx of C\$341 million, over a 17 year mine life. Total operating costs net of tantalum by-product credit are forecast to be US\$337/t spodumene.

All in all, Critical Elements has a great asset at Rose, and just needs to achieve financing. Possible 2023 or 2024 producer. Critical Elements trades on a current market cap of C\$231

million (US\$182 million).

Global Lithium Resources Limited

Global Lithium 100% owns the Marble Bar Lithium Project (“MBLP”) in the Pilbara region of Western Australia. Global Lithium is a new ASX listing raising A\$10 million on May 6, 2021 at A\$0.20 per share. The MBLP Archer deposit has a maiden Inferred Mineral Resource of 10.5Mt @ 1.0% Li₂O. The Archer deposit comprises a swarm of spodumene bearing pegmatites over a 3km by 1km zone.

What's quite interesting is that Global Lithium's MBLP is located in the very same Pilbara region as lithium producer Pilbara Minerals (market cap A\$4.2 billion) and the Wodgina deposit (Mineral Resources (ASX: MIN)/Albemarle (NYSE: ALB) JV).

It is still very early days with a resource update planned for Q4, 2021. Global Lithium trades on a market cap of just A\$35 million (US\$25.5 million). High risk/high reward.

Global Lithium 100% owns the early stage lithium spodumene exploration project at Marble Bar, Pilbara region, Western Australia



Source: [Company presentation](#)

Lithium Energy Limited

Lithium Energy majority owns two projects – The Solaroz Lithium Project, Argentina (90% owned) and the Burke Graphite Project, Australia (76.5% owned, potential for 100%).

Lithium Energy is a new ASX listing from May 2021, having been spun out from Strike Resources. The Solaroz Lithium Project is spread over 12,000 hectares of very well located lithium

tenements within the Salar de Olaroz Basin in Argentina. The Solaroz Project is directly adjacent to the tenements of both Orocobre's project and Lithium Americas (NYSE: LAC)/ Ganfeng Lithium project. This is prime real estate in Argentina.

Lithium Energy is just at the very beginning of their exploration stage and will spend the next two years (assuming the EIA Report is approved) exploring their tenements.

Lithium Energy trades on a market cap of just A\$30 million (US\$22 million). High risk/high reward. Patience required.

Lithium Energy tenements [red] adjacent to Orocobre [yellow] and adjacent and near LAC/Ganfeng Lithium [blue]



Source: [Lithium Energy](#)

Closing remarks

If the forecasts are correct and we see a massive demand wave for lithium the next 10-20 years then there will be a need for a lot more new lithium miners. The five in this article include three potential near term lithium producers (Sigma Lithium, Neo Lithium, Critical Elements Lithium) and two very low market cap early stage lithium explorers (Global Lithium Resources, Lithium Energy Limited).

Be sure to diversify and not to miss one of the biggest trends this decade.

Disclosure: The author is long Sigma Lithium, Neo Lithium, Global Lithium Resources, Lithium Energy Limited