

# GREEN LITHIUM'S EUROPEAN AMBITIONS



Credit:  
Green  
Lithium

As Europe builds out its megafactory battery capacity, calls for a domestic raw material supply are growing.

**Benchmark** recently spoke to **Green Lithium's** Managing Director, **Richard Taylor**, about the company's plans to bring lithium processing to Europe and lithium deposits in the UK.

Richard Talyor,  
Managing Director,  
Green Lithium

- **Benchmark: Green Lithium's focus and expertise is in lithium processing and refining. Can you provide us with an overview of what Green Lithium does and your plans going forward?**

**Richard Taylor:** Green Lithium's primary focus is on our approach to lithium processing and refining. We are collaborating with key strategic partners to apply our Pit2Plant refining approach to build and operate a centralised European lithium refinery. Although our priority is to set up and establish a processing facility to service Europe's lithium operations we are also looking at developing hard-rock lithium assets in the UK.

**Benchmark: We understand Green Lithium's focus is on its approach to refining and processing. Can you talk us through this?**

**RT:** Green Lithium has developed a unique end to end approach to lithium mineral processing, which we call Pit2Plant processing.

There are three main benefits to using our Pit2Plant approach, these are; reduced costs, reduced risk, and improved delivery times.

Pit2Plant uses modern mineral processing technology to optimise recovery during beneficiation and downstream hydrometallurgy. Through utilising this expertise, Green Lithium is able to increase project value and profit in comparison to traditional lithium processing.

Pit2Plant processing is built on three main pillars:

Firstly, we have constructed this approach by combining proven methodology and technology.

This is a blend of our own experience and that of our partners who have been instrumental in developing processing circuits for some of the world's most successful lithium projects to date.

Secondly, our process is built on lessons we've learned. A key aspect of our approach is to recognise and build on what has been done before in the mineral processing space – particularly over the past 10 years – and to understand what was successful, but more importantly, what was unsuccessful and why. The development of processing technologies has come on leaps and bounds in recent

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Green Lithium

years, mainly fuelled by Australia's hard-rock lithium boom.

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Finally, we've also built a working consortium of industry experts that brings together knowledge on lithium beneficiation and hydrometallurgy from across the world. This ensures our project has access to advanced facilities, cutting edge lithium processing technologies, and critical assurance reviews from top industry experts.

**Benchmark: We understand Green Lithium intends to build its own centralised European lithium refinery. Are you looking to achieve this by yourself or would you actively look for partnerships with other stakeholders from the supply chain?**

**RT:** Partnering on a project like this is essential for success.

We are in talks with potential partners and looking to de-risk projects by securing long-term offtake agreements with European battery manufacturers. Equally, we are looking to secure supply agreements for lithium concentrate with a number of European lithium mines that are due to come online in the next few years.

That, coupled with an underwritten delivery agreement from our engineering and processing partners, significantly de-risks projects and is the foundation for the best chances of processing success.

**Benchmark: Would you look to source your feedstock exclusively from Europe?**

**RT:** We're working with European sources to feed the refinery.

We offer a service to critically review suppliers' concentrate flowsheet, optimising the grade of concentrate and increasing recovery using the Pit2Plant approach.

We are also pursuing joint ventures with lithium miners to develop, build and run their onsite processing facility. The purpose of this is to offset processing risk and ensure the highest grade and greatest recovery for the centralised refinery.

**Benchmark: What are your views on the**

**lithium carbonate versus lithium hydroxide debate in the battery space? Will you focus on one particular chemistry?**

**RT:** Both of these lithium products come with benefits.

For us, lithium hydroxide is seen as higher risk and has a less well-defined processing route. But it's higher market value relative to lithium carbonate is attractive. Lithium carbonate obviously has an established and defined processing route and is clearly lower risk, with minimal by-product compared with lithium hydroxide. However, with this comes a lower market value.

We'd look to produce both products from our refinery to meet demand from multiple markets. This gives our refinery an advantage in that it can react dynamically to market conditions, meeting demand for both products. We feel this is another de-risking element that benefits our project.

**Benchmark: Europe is developing its battery cell production capacity and looks to increase its share of this in the next decade. European demand for lithium is set to increase dramatically. To what extent do you think Europe can meet these demands domestically?**

**RT:** Between now and 2030 we think current sources and the new European suppliers in the pipeline will satisfy European demand.

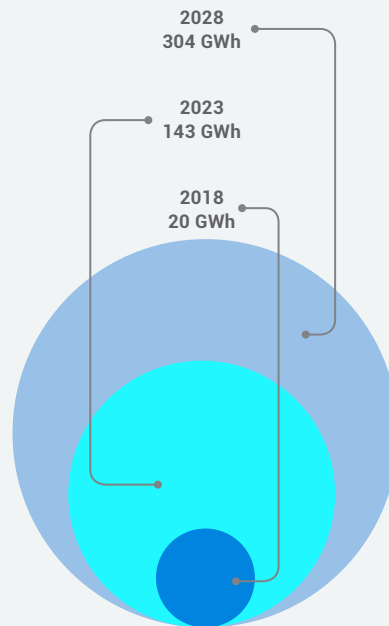
Beyond this, Europe will experience stark shortages if new sources are not identified and developed soon.

**Benchmark: China has taken a dominant role in the processing and refining stage of the lithium supply chain. Do you think this will continue? Do you expect other regions to take a more active role as battery cell production increases?**

**RT:** China has led the way in this space and developed its supply chain very quickly. We've just seen Neometals and Manikaran Power sign an MOU (memorandum of understanding) for a feasibility evaluation to develop a refinery in India to contribute to the Indian battery market.

Processing and refining of lithium is often overlooked but it is the critical component of any strategic regional supply chain.

**EUROPEAN MEGAFACTORY CELL PRODUCTION CAPACITY TO 2028**



European battery cell production capacity is set to increase rapidly in the coming decade. Europe currently has no commercial lithium production or refining capacity of its own to meet this demand but plans are afoot to change this

Source: Benchmark Mineral Intelligence

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We are confident that as regions build out their battery metal supply chains there will become several refinery's supplying each region and it would be naïve to think this could be outsourced to China indefinitely.

**Benchmark: You're also exploring hard-rock lithium deposits in the UK. Can you provide us with details of what you've found and what your plans are for these deposits?**

**RT:** We are currently looking at developing two sites in the UK with a focus on hard-rock pegmatites, zinnwaldite and other lithium-bearing micas. One of the sites shares the same geochemical signature as the Cinovec Lithium Project that European Metals are developing in the Czech Republic.

We have selected the assets on geological, economical, logistical, geopolitical and strategic merit.

Metallurgical studies have been completed on rock samples that can form the basis of an independently audited mineral resource estimate to JORC or Ni-43-101 standards. Initial results are encouraging and we believe that these assets have the potential to produce a significant contribution to the European lithium demand once developed.

**Benchmark: What are your thoughts on Australia's recent boom in hard-rock lithium? Are there any lessons you've learnt from this?**

**RT:** We have learned a lot from the development of hard rock assets in Australia, these learnings form one of the key pillars of our Pit2Plant approach.

Understanding the mineral distribution and mineral characterisation throughout your deposits at the start saves time, money and uncertainty later in the project. This is key to planning the best fit processing circuit for the asset.

Once you commit to a processing circuit it's very costly and timely to change your mind, so getting it right first time is paramount.

With this in mind, we put particular focus on getting this correct first time.

We utilise our consortium of partners and expertise to curate the plan in a timely manner, designing a bespoke, robust, informed processing route.