

Opening Keynote Presentation: How Federal Government are Supporting the Lithium Industry

- With numerous projects in North America, and two of the largest producers head quartered in the United States, what is the American Opportunity for Lithium?
- With dramatic shifts on the horizon for the lithium supply chain, how can North America seize this opportunity?
- How is the federal government supporting lithium production and the battery supply chain?
- With a significant position in the Tier One battery share, how can America drive the EV market forward?

Mark Pituch, Senior Energy Officer, Bureau of Energy Resources – U.S. Department of State

Panel Discussions

Executive Panel: View from the Majors

- How have the lithium producers adapted to the evolving lithium market to meet the long-term demand?
- Challenges and opportunities of the lithium supply chain arising from the rapid growth of the industry
- Impact of regulatory frameworks on lithium producers
- Commoditisation and standardisation of lithium compounds
- Lithium-ion battery market, key opportunities and challenges for lithium?
- How has COVID-19 impacted the lithium industry? Will we see any long term changes because of this?

Tina Craft, Chief Commercial Officer, Albemarle Corporation

Representative, SQM

Sam Pigott, Head of Business Development - North America, Ganfeng Lithium Co, Ltd

Walter Czarnecki, Chief Commercial Officer, Livent

Panel: Lithium Pricing and Products

- What forces outside of pure supply & demand are currently driving the lithium price?
- What are the strengths and weaknesses of current lithium pricing methods?

Virtual Conference: Lithium Supply & Markets 2020

October 26 – 28

Agenda

- What challenges are faced by exchanges looking to develop benchmarked price contracts
- What cost curves has the industry seen since last year, and what does the future hold?
- Where will the lithium price go in the new decade?

Will Adams, Head of Base Metals & Battery Material Research, Fastmarkets

Dalila Oeurghi, Price Reporter – Lithium, Fastmarkets

Panel: Bull or Bear? An Investor's view on Lithium Financing

- Hear from key lithium investors how they assess the current lithium market and its attractiveness as an investment opportunity
- How important will benchmark pricing be for investors in the lithium industry?
- What strategies are investors using to maximise value in lithium markets, e.g. using royalties & streaming over
- How can lithium benefit from the ESG revolution in finance? Will there be greater access to capital?

Panel: Direct Lithium Extraction (DLE): Separating the Hype from Reality

- An in-depth analysis of DLE as method of extraction, its strengths and weaknesses and what the future holds.

Moderator: *Alex Grant, Partner, Jade Cove Partners*

David Deak, President, Marbex LLC

Dana Graves, Director of Technology, Livent

Mark Machado, Process Engineer, Hatch

Supply Chains

Government Presentation: The European Green Deal: What it means for Lithium

- How will EU spending programs benefit lithium production, processing and consumption?
- What role will the EU hold in the battery supply chain?

Panel: Developments in the European Battery Value Chain

- What impact will the EU's ambitious plans have on the European Battery value chain?
- With a significant market share on end users, what role does Europe play as a market for Lithium?
- How is Europe placed in the global lithium market?

Government Presentation: Supporting Lithium Markets in Australia

- How is the Australian government supporting lithium production and mining?
- What plans are being made to for upstream developments in Australia?

Jessica Robinson, General Manager – Critical Resources Facilitation Officer, Department of Industry, Science, Energy & Resources, Australian Government

Panel: Lithium Down Under

- How can the Australian market adjust in the current conditions? Have they been impacted the hardest in light of COVID-19?
- How can Australia increase their competitive position within the global supply chain?
- What does the future hold for carbonate?

Government Presentation: Chile

Speaker and content to be confirmed

Government Presentation: Argentina

Speaker and content to be confirmed

Panel: Inside the Lithium Triangle

- What are the key trends in production in South America?
- How have permitting rules influenced the amount of new projects? Are these fit for purpose?
- What challenges face South American production?

Panel: “The American Opportunity”

- While South America and China dominate the current lithium supply chain, what role can North America play in the future supply chain?
- What investment opportunities can be found in North America?
- How can America become the focal part of the battery supply chain?
- What steps must governments take to ensure this?

Dan Blondal, CEO, Nano One Materials Corp.

Pre-recorded presentations

Juniors	Production	Lithium Markets	Battery Materials
<p>Lithium Off-Take Agreements</p> <ul style="list-style-type: none"> - A look into the current trends regarding offtake agreements in the lithium industry - What are the strengths and weaknesses or the current situation? <p><i>Daniel Jimenez, Partner, Ili-Markets</i></p>	<p>Supporting Green Lithium Production</p> <ul style="list-style-type: none"> - How are lithium producers and refiners ensuring that their operations are in line with new ESG guidelines? - How can we prevent future “green washing” of lithium production? - Is there a need for greater regulation or is the industry able to self-regulate? <p><i>Ellen Lenny-Pessango, Country Manager – Chile, Albemarle Corporation</i></p>	<p>Lithium Cost Curves</p> <ul style="list-style-type: none"> - A presentation on cost curves within the lithium industry and what the future may hold in regards to prices in future. <p><i>Rodney Hooper, Partner, RK Equity</i></p>	<p>The Future of Battery Grade Cobalt</p> <ul style="list-style-type: none"> - What is the present & future demand for cobalt? Do we have enough supply? - What strategies are companies taking to ensure ethical cobalt sourcing? - What do producers make of the trends for reducing cobalt concentration in cathodes?
<p>Junior Project Presentation TBC</p>	<p>Geo-Thermal Lithium Production</p> <ul style="list-style-type: none"> - What advantages/disadvantages does geo-thermal lithium extraction have over traditional extraction techniques? - How crucial will geo-thermal lithium be in future US production? 	<p>China’s Lithium Supply & Demand Dynamics</p> <ul style="list-style-type: none"> - Different logic between China and lithium market outside of market (commodity vs. speciality chemical) - Taking a closer look at WA concentrate, China lithium salt capacity/output and China cathode and battery output. 	<p>Developments in Anode Technology</p> <ul style="list-style-type: none"> - What materials will be required for the current and next generation of anode technology? - What are the advantages and safety concerns associated with silicone anodes?

		- Hard-rock or brine? Looking at Qinghai output, cost curve, product quality and Capex	
Junior Project Presentation TBC	<p>CO2 Impact of the Battery Quality Lithium Hydroxide Supply Chain</p> <p>- Lithium is undoubtedly a key element to the climate revolution but the sustainability of current lithium extraction processes has been called into question, how can we minimise the CO2 levels in production</p> <p><i>Alex Grant, Partner, Jade Cove Partners</i></p>	<p>Inside the Asian Battery Market</p> <p>- How is the Chinese lithium and battery market structured? - How many converters are there and how much is their capacity? - What are the new economic incentives for electric vehicle purchases? Did they affect the projected growth figures?</p> <p><i>Jingwen Sun, Executive Director – Equity Research, Minmetals Securities Ltd</i></p>	<p>The Future for Battery Grade Graphite</p> <p>- What is the current market sentiment around battery grade graphite? - Natural vs Synthetic graphite, which is preferred for the battery industry? - What does the future hold for graphite markets? - How are environmental regulations impacting graphite production?</p>
Junior Project Presentation TBC	<p>A Guide to Lithium Permitting Regulations</p> <p>- If we are to see a huge increase in demand in lithium then there will need to be a significant increase in lithium production - How can juniors best tackle permitting issues to ensure that there is adequate supply moving forward?</p>	<p>Further Downstream: Developments in Gigafactories</p> <p>- The past year has seen numerous announcements of largescale investment downstream, how will these new facilities alter the landscape for batteries?</p>	<p>Battery Grade Nickel Market Outlook</p> <p>- What are the solutions to limited nickel sulphide reserves? - What are the supply & demand forecasts for battery grade nickel? - What impacts will this have on prices?</p> <p><i>Denis Sharypin, Head of Market Research, Norilsk Nickel</i></p>

<p>Junior Project Presentation TBC</p>	<p>Responsible Sourcing</p> <ul style="list-style-type: none"> - How does responsible sourcing in the lithium market work in practice? - Will the emergence of technologies such as blockchain improve this? - What demands are being put in place by OEMs in regards to responsible lithium? 	<p>Solid State Batteries: The Key to the Energy Transition</p> <ul style="list-style-type: none"> - How far are we from commercialising Li-Metal Anodes? - What are the challenges in this process? - What are the real world impacts of this product? How does it change the face of the battery industry? <p><i>Dean Frankel, Strategic Business Development, Solid Power, Inc.</i></p>	<p>Advanced lithium-ion battery chemistries today and for the next generation</p> <ul style="list-style-type: none"> - Today’s lithium-ion batteries. NMC vs NCA vs LFP. - What are the advantages and disadvantages of today’s batteries? - Thinking about next generation lithium-ion batteries and their advantages, such as solid state batteries.
<p>Financing a Strong Lithium Project</p> <ul style="list-style-type: none"> - There are no shortages of lithium projects in the market right now, but what makes a good one? - How important are people and leadership teams in a project? <p><i>Howard Klein, Partner, RK Equity</i></p>	<p>Rapid extraction technologies: The trade-off between project risk and economic reward</p> <ul style="list-style-type: none"> - What project risks are posed by incorporating a proprietary technology into your flowsheet? - How much capital can be saved by replacing ponds with a rapid extraction technology? - How does use of a rapid extraction technology effect project cashflow? <p><i>Zachary Loewenthal, Process Engineer, Hatch</i></p>	<p>The future of mobility- Trucks, buses, scooters:</p> <ul style="list-style-type: none"> - What are the latest developments of electrification in major cities? - Regulator pushes for developments around the world - What challenges does this sector face? - How do these li-ion batteries differ to EVs? <p><i>Kevin Riddell, Senior Manager, Powertrain Forecasting, LMC Automotive</i></p>	<p>Perspectives and Challenges of Next-Generation Automotive Batteries (an OEM Roadmap)</p> <ul style="list-style-type: none"> - How does an OEM view the future for EV batteries? - What challenges stand in the way of production? <p><i>Reserved by OEM</i></p>

	<p>Chinese Lithium Chemical Converters Now and their Future Global Impact</p> <p>Chinese hardrock converters by 2018 utilized approximately 60% of global lithium supply.</p> <ul style="list-style-type: none">- A cost breakdown of the Chinese converter/refiners will be discussed along with an understanding of their technical evolution. These key factors directly impact the raw material value.- Coupling this cost and technical review to a global market view will provide a unique insight into the potential impact of Chinese converters on the future global value chain, including raw materials and product pricing. <p><i>Sunny Huang, Consulting Engagement Manager, Hatch</i></p>	<p>A New Decade for Lithium: An Economist's Perspective</p> <ul style="list-style-type: none">- The new decade has begun in tumultuous fashion, but what do forecasts suggest for the lithium market in the next 10 years?- What lessons can be learnt from the previous decade? <p><i>Daniela Desormeaux, Founder and CEO, SignumBox</i></p>	<p>Nano One: Long Lasting Cathode Breakthrough</p> <ul style="list-style-type: none">- A presentation on Nano One Materials' breakthrough regarding a long life single crystal cathode.- An update on future developments of this new technology and what it means for batteries. <p><i>Dr. Stephen Campbell, Chief Technology Officer, Nano One Materials Corp</i></p>
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Roundtables

Water Strategies in Lithium Production

- What new technologies are on the horizon to aid in greater effectiveness in water usage
- How can companies ensure that water is not lost in the brine process?

Recycling in Lithium-Ion Batteries

- Will secondary supply be the solution to the shortages in the value chain?
- How will secondary lithium supply impact the whole supply chain?

Applying membrane chemistry and detailing the impact to the bottom line for lithium processes

Suez will use this roundtable to provide education on the basic chemistry concepts around membranes (NF, RO, UF) and the chemistry of low, medium and high solution concentrations. Additionally we would detail the impact of using membranes to the bottom line for lithium processors.

John Peichel, Global Market Development, Suez Water Technologies & Solutions

Improving Sustainability in Battery Materials

- A look into how sustainability can be improved across the battery supply chain, including looks into Cobalt, nickel and lithium raw material extraction & the carbon footprint of EVs vs ICE vehicles.

Live Q&As with experts

Tesla Battery Day Analysis

- What key announcements were made during the battery day?
- What impact will these have on lithium markets?
- What are the key takeaways for the market?

Critical Look at Cathodes & Anodes

- What is the cost of lithium as a cathode material and in the cell?
- High-nickel cathode: How will they deliver on a new class of high energy cathodes for li-ion batteries?
- What would be the outcome of less cobalt?
- What developments have we seen in Lithium anodes?

Developments in Li-ion Batteries

- Has there been a shift away from NCM811 to other chemistries?
- What benefits does LFP hold over nickel rich batteries?
- What impact does Elon Musk's recent tweets have on the raw material side of the market?
- How will the new developments impact sustainability in batteries? For instance the reduction in reliance of cobalt?

Li-ion Battery Supply Chain Vulnerability

- What vulnerabilities has COVID-19 exposed to us in regards to the Li-ion supply chain?
- Will there be continued over reliance on China as both producer & consumer?
- Do governments need to do more to protect their countries' industries?
- What future powerhouses could emerge?

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Moderator: Ryan Hanrahan, Director, Wave International

Chris Berry, President, House Mountain Partners

