

# Forwardlooking statement

- During the course of this presentation, Nemaska Lithium Inc. will make a number of statements with regard to the Company's projects, business strategy and plan, which could be construed as forward-looking.
- Such forward-looking statements are subject to risks and uncertainties that could cause results to be materially different than expectations. It is uncertain if further work will in fact lead to production of mineral resources and of lithium compounds.
- Nemaska Lithium filed a NI-43-101 compliant feasibility study report on SEDAR on February 23, 2018, concerning its Whabouchi project. All technical information should be reviewed according to this 2018 feasibility study.
- All figures are in Canadian Dollars unless otherwise specified. Exchange Rate is CAD 1.00 = USD 0.77



## **Corporate Overview**

## Fully Funded Project under construction

 Nemaska is fully funded for project construction plus one year of working capital following the closing of CAD 1.1 B.

# Vertically integrated lithium project

 Nemaska Lithium's Whabouchi project in Québec is a vertically integrated lithium project from the raw material at Whabouchi mine to the Electrochemical Plant in Shawinigan where it is transformed into high-purity lithium hydroxide and lithium carbonate.

# Lowest cost producer of lithium hydroxide

 With a vertically integrated operation, proprietary process, and access to affordable hydroelectric power in Québec, the Whabouchi project is being forecast to become the lowest cost producer of lithium hydroxide globally.

#### **Near-term cash flow**

 Whabouchi Mine and concentrator are expected to start production with sales of spodumene concentrate in Q3 2019. An offtake agreement for the whole production has been signed for approximately 2 years while the electrochemical plant is ramping up.

# World-class counterparties

• Nemaska Lithium has secured offtake agreements with FMC and Johnson Matthey and signed an agreement in principle with Northvolt. The various groups have given the project key endorsements through offtake contracts, product qualification and financial support.

# Strong support from key stakeholder

 Nemaska Lithium has strong support from both the Government of Québec and the federal government. The Québec government holds about 12.5% of the Corporation. Additionally, Softbank holds 9.9% of Nemaska and the Cree Nation of Nemaska is a shareholder.

## Producing Phase 1 Plant since Feb. 2017

Nemaska Lithium is currently producing lithium hydroxide from Whabouchi spodumene concentrate
demonstrating its ability to produce high purity lithium hydroxide but also enabling the qualification
of product with off-takers and potential customers.

3



## **Project Financing of CAD 1.1B**

#### **Equity CAD 454M**

- A 94M private placement from world-leader SoftBank Group Corp. SoftBank also has a right of first offer to purchase up to 20% of lithium salts produced from Shawinigan.
- A 80M private placement with Ressources Québec
- A 280M public offering through a bought deal

#### **Streaming USD 150M**

Signed a streaming facility agreement with Orion Resources Partners (UK) LLP under which Nemaska Lithium and Orion will share 14.5% of future production of all lithium products. Net effect is Orion receives 8.7% of total revenue. The agreement is capped at 5,000 t of product per year.

#### **Debt USD 350M Senior Secured Bond Offering**

The Bonds have a five year term and bears an 11.25% interest rate per annum

#### **Use of Proceeds**

Project financing	CAD	801M
Interest payments	CAD	128M
Working capital	CAD	87M
Cost over run account	CAD	40M
Transactions costs	CAD	48M

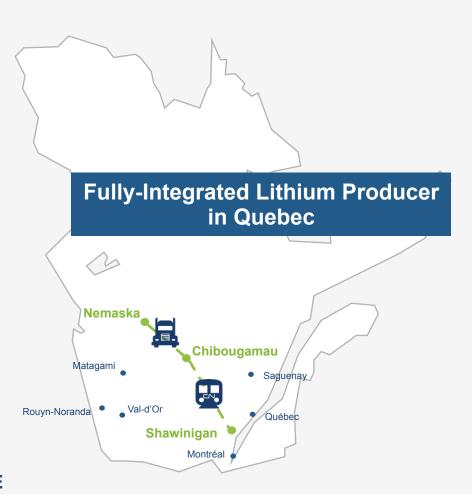


## **Nemaska Lithium Project Overview**

- One of North America's largest spodumene deposits located in the Eeyou Istchee James Bay region, Canada
  - 33 years initial mine life.
  - Expected to produce 213,000 tonnes/y of 6.25% (Li<sub>2</sub>O) spodumene concentrate

Reserve Overview						
Category	Li <sub>2</sub> O					
	Open pit					
Proven and probable	24	1.53%				
	Underground					
Proven and probable	13	1.16%				
	Combined					
Proven and probable	37	1.40%				

 Shawinigan Electrochemical Plant to convert spodumene concentrate to lithium hydroxide and lithium carbonate with a 33,000 tonnes LCE annual capacity





## Whabouchi Mine | Construction Progress











## **Electrochemical Plant** | Existing Buildings in Shawinigan

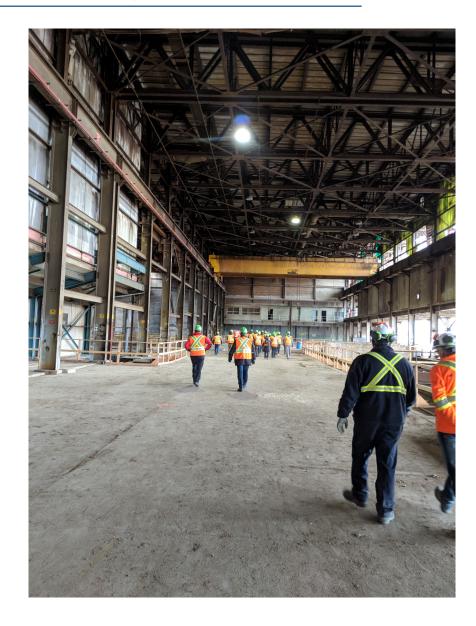




# **Electrochemical Plant** | Construction Progress

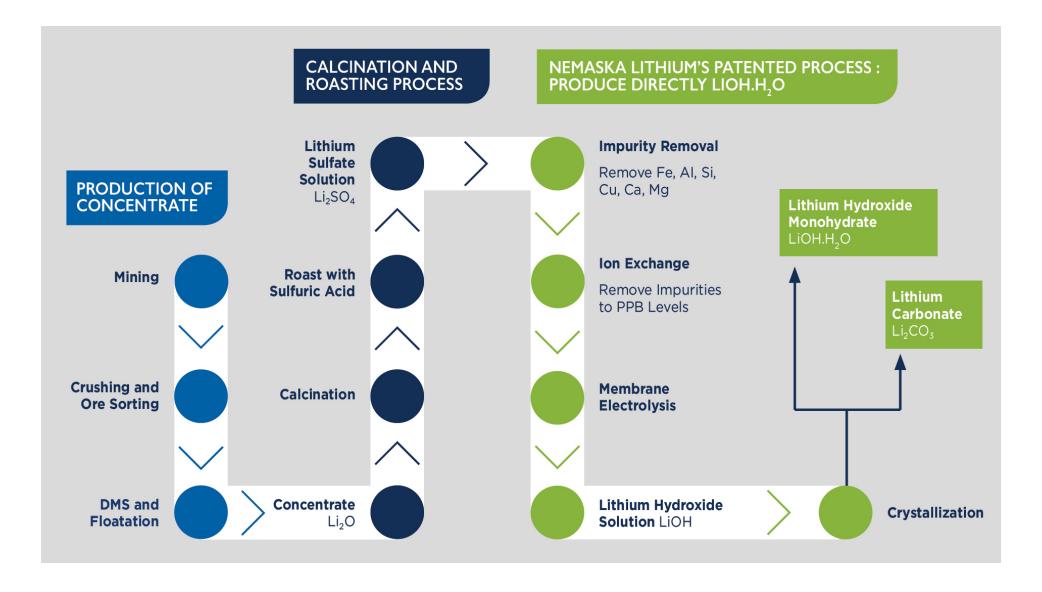






## A Unique Process | Whabouchi Mine & Electrochemical Plant



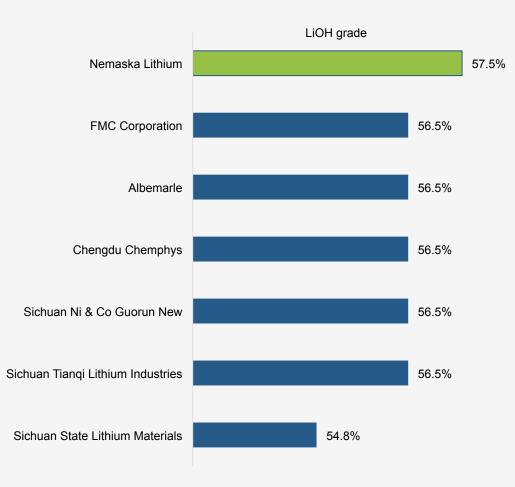




## **Nemaska Purity Hydroxide Compares Well**

## **Lithium Hydroxide Grade Comparison**

## **Purity Comparison**



Product	Market specifications <sup>(1)</sup>	NMX Specifications	
LiOH, wt%	54.8 - 56.5	57.5	
Ca, mg/kg	10 – 100	< 1	
Na, mg/kg	20 - 500	< 20	
K, mg/kg	10 – 250	< 10	
Mg, mg/kg	10	< 1	
Fe, mg/kg	5 – 21	< 5	
Al, mg/kg	10	< 1	
CO2, wt%	0.035 - 0.35	< 0.2	
CI, mg/kg	15 – 100	< 10	
SO4, mg/kg	50 - 300	< 150	
Cr, mg/kg	5 – 100	< 1	
Cu, mg/kg	1 – 5	< 1	
Ni, mg/kg	1 – 10	< 1	
Si, mg/kg	20 - 30	< 10	
Zn, mg/kg	10	< 1	
Sol. Acid, mg/ kg	40 – 1000	< 50	



## **Project Economics Key Figures**

#### **Expected Mine Life and Payback Period**

## 33 years

with 2.9 year (2 year\*\*) payback period (after-tax)

#### **Average Cost Per Tonne** | Spodumene Concentrate

CAD 334/t

(USD 257/t) CIF Shawinigan (open pit)

#### Average Cost Per Tonne | Lithium Hydroxide

CAD 3,655/t

(USD 2.811/t) FOB Shawinigan

#### Average Cost Per Tonne | Lithium Carbonate 99.99%

CAD 4,424/t

(USD 3,403/t) FOB Shawinigan

#### **Total Initial Capital Costs**

**CAD 801M** 

(USD 616M) in CAPEX including contingency

#### **Yearly Average Production**

#### Whabouchi Mine

 $\approx$  213,000 tonnes of concentrate (6.25% Li<sub>2</sub>O)

#### **Shawinigan Electrochemical Plant**

≈ 23,000 tonnes of lithium hydroxide

≈ 11,000 tonnes of lithium carbonate

#### NPV

CAD 3.3B\* (USD 2.5B) CAD 2.4B \* (USD 1.8B)

CAD 3.0B \*\* (USD 2.3B) CAD 2.2B\*\* (USD 1.7B)

8% Discount (pre-tax)

**8% Discount** (after tax)

#### Internal Rate of Return (IRR)

34.4%\* (pre-tax)

30.5% (after tax)

60.5%\*\* (pre-tax)

56.0%\*\* (after tax)

Sales Prices FOB Shawinigan lithium hydroxide USD14,000/t, lithium carbonate USD 9,500/t for first 5 years and USD 12,000t thereafter

All calculations assume a 6.25% (Li<sub>2</sub>O) spodumene concentrate

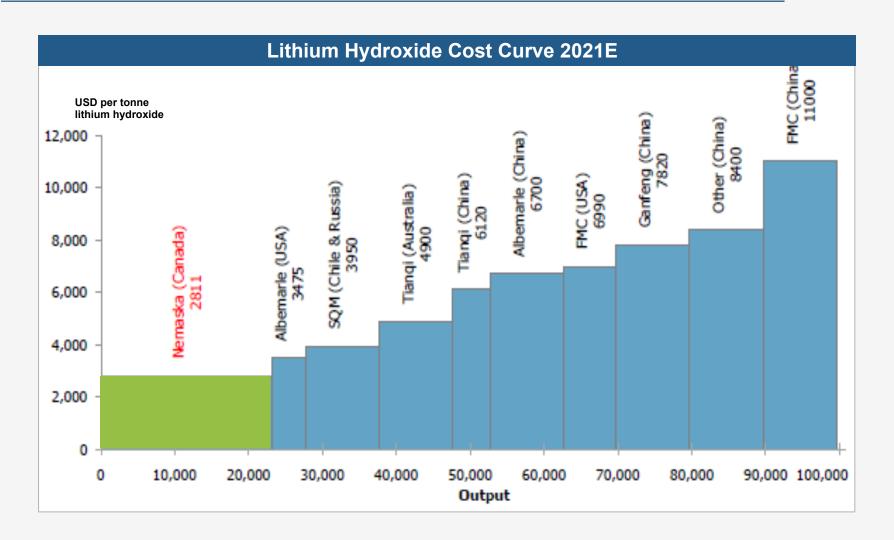
Exchange rate CAD/USD: 0.77

\*Only equity as per the Feasibility Study

\* \* Using the CAD 1.1B Project financing closed

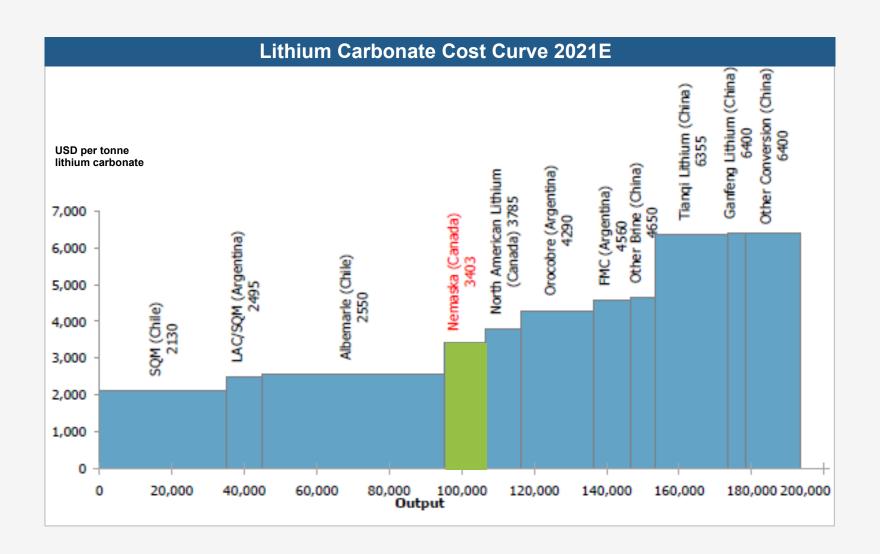


## Nemaska to Become a Low Cost Producer



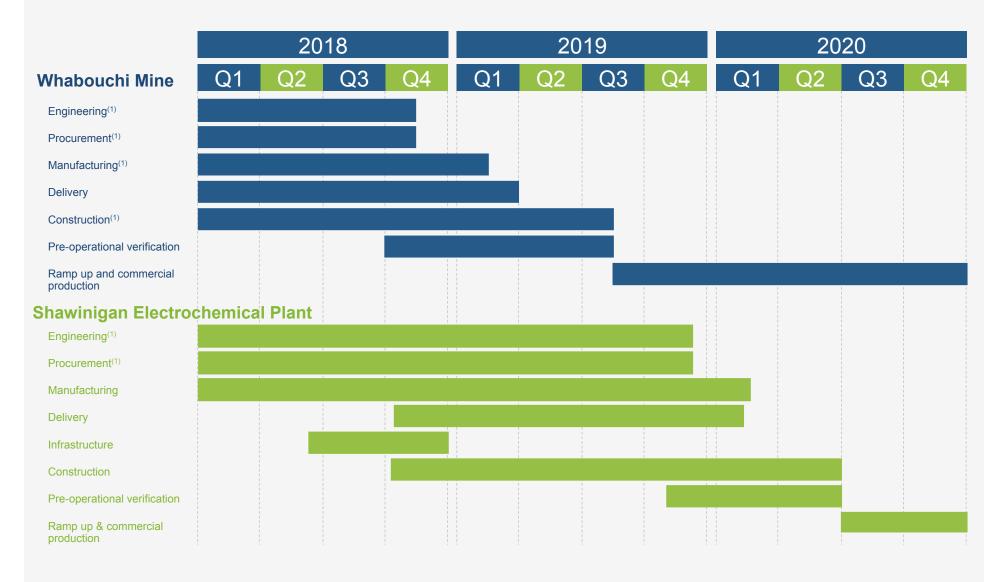


## Nemaska to Become a Low Cost Producer





## **Construction Schedule**





## Capital Expenditures as of September 1, 2018

# All amounts are in Canadian dollars Expenditures and commitments as of September 1, 2018

Description Budget		То	date	Estimate to complete	Estimate at completion	Variance To date
		Commitments	Incurred	·	(EAC)	
Whabouchi mine Site	303.6M	146.3M	93.0M	167.3M	313.6M	10.0M
Shawinigan Electrochemical Plant	470.8M	126.1M	41.9M	355.3M	481.4M	10.6M
Contingency	100.3M	\$	\$	79.7M	79.7M	(20.6M)
TOTAL WHABOUCHI & SHAWINIGAN	874.7M	272.4M	134.9M	602.3M	874.7M	\$



## **Quality Offtake Agreements Secured**

# Johnson Matthey

- Johnson Matthey is a global specialty chemicals company.
- Johnson Matthey focuses on clean air, clean energy and low carbon technologies and is an expert in the application and recycling of precious metals.
- Johnson Matthey has operations in over 30 countries and employs around 13,000 people.
- Its products and services are sold across the world to a wide range of advanced technology industries.
- Johnson Matthey has made an up front payment of CAD 12 million for services and product from the Phase 1 Plant.



- FMC is a U.S. chemical manufacturing company based in Philadelphia, Pennsylvania, United States of America.
- FMC serves the global agricultural, industrial and consumer markets with innovative solutions, applications and quality products.
- FMC employs approximately 6,000 people globally and operates its businesses in three segments: FMC Agricultural Solutions, FMC Health and Nutrition and FMC Lithium.
- FMC has paid a lump sum of USD 10 million to Nemaska Lithium.



## **Quality Offtake Agreements Secured**



- With over 20 years' experience of development and production of batteries, LG Chem has established itself as one of the world's leading lithium-ion manufacturers. The company is a primary supplier of lithium batteries throughout the world for the mobile phone and hybrid/ electric vehicle industries & Energy Storage System (ESS).
- Under this agreement, Nemaska Lithium agrees to supply LG, on a take-or-pay basis with 7,000 tonnes per year of lithium hydroxide produced for an initial 5-year period scheduled to start in October 2020.

# northvolt

- Northvolt was founded in 2016 with the mission to build the world's greenest battery, with a minimal carbon footprint and the highest ambitions for recycling, to enable the European transition to renewable energy.
- Northvolt's team of experts is building the next generation battery factory focused on process innovation, scale and vertical integration.
- Once completed, it will be Europe's largest battery factory and will produce 32 GWh worth of battery capacity annually.
- Northvolt agreed to purchase, on a take-or-pay basis, up to 5,000 but not less than 3,500 metric tonnes per year of lithium hydroxide, for a 5-year period commencing upon the start of commercial production at both the Shawinigan Plant and Northvolt's projected Skellefteå factory in Sweden.



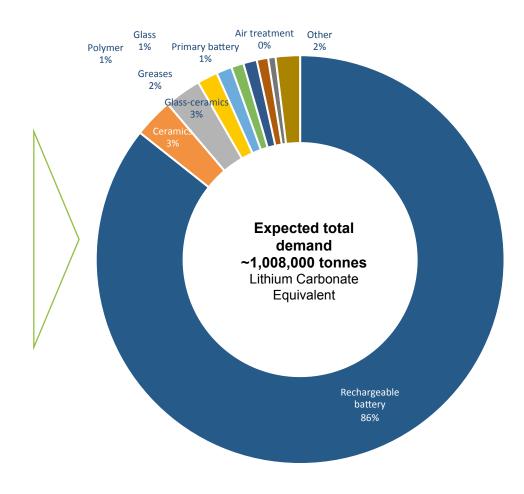


## Lithium Uses 2016 and 2026E

## **Uses of Lithium in 2016**

# Primary battery 2% Other 9% Metallurgical powders 4% Glass 5% Total demand ~197,000 tonnes Lithium Carbonate Equivalent Glass-ceramics 12% Ceramics

## **Uses of Lithium in 2026E**





## **Lithium Demand Per Product 2016 - 2031**

	<u>2016</u>	<u>2021</u>	2023	<u>2026</u>	<u>2031</u>	<u>CAGR '16-</u> '31 (%)
Battery-grade carbonate	72,200	150,600	202,100	314,200	460,100	13.1
Technical-grade mineral conc.	37,500	42,100	44,100	47,300	53,100	2.3
Technical-grade carbonate	27,000	30,400	31,900	34,200	38,600	2.4
Technical-grade hydroxide	14,100	15,200	15,700	16,400	17,700	1.5
Battery-grade hydroxide	11,700	78,600	170,800	549,900	1,605,500	38.8
Butylithium	9,200	10,700	11,300	12,400	14,400	3.0
Battery-grade metal	4,300	6,200	7,200	9,500	14,200	8.3
Bromide	4,200	4,900	5,200	5,700	6,600	3.1
Other <sup>1</sup>	16,900	18,000	18,600	19,300	20,800	1.3
Total	197,100	356,700	506,900	1,008,900	2,231,000	17.6
High	-	423,900	670,343	1,633,900	4,509,400	23.6
Low	-	316,500	425,423	776,900	1,583,700	14.7
Source: Roskill estimates						

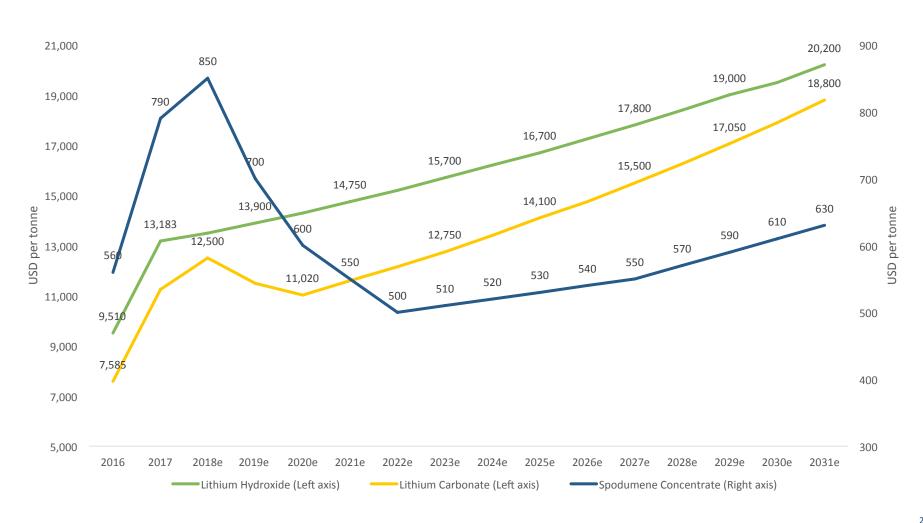
Source: Roskill estimates

Note: 1 - Includes some of the products above that have not been differentiated from the total



## **Pricing Outlook**

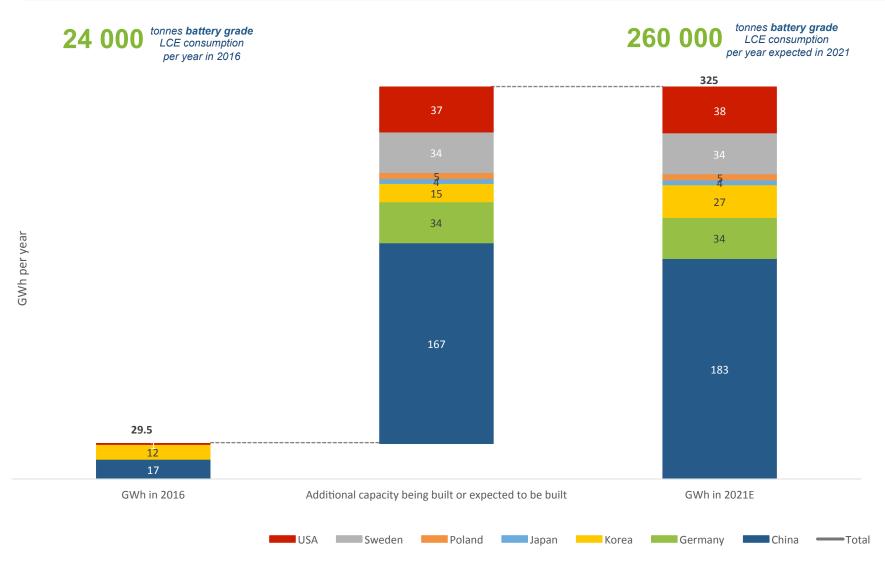
## Nominal Price Forecasts for Spodumene Concentrate, Lithium Carbonate and Lithium Hydroxide





## **Gigafactories Driving Demand for Lithium**

## 10x in Expected Lithium Demand from Gigafactories between 2016 – 2021E







## **New Lithium Development Projects** (1)

Total		176,700	273,750	743,890	1,263,890	
New mineral operations	Various	14		(4)	450,000	E.g. Lithium Americas, Critical Elements, European Lithium, Bacanora, Keliber, etc.
operations				Page	45,000	Eramet, Galaxy (Sal d'Vida), Lithium X, Pure Energy, etc.
New brine	Various	6,200	6,200	6,200	6,200	committed E.g. LSC Lithium, Enirgi,
Mineral Bikita	Alberto, Spain Bikita, Zimbabwe	400	400	400	400	committed No further expansion
Mineral Spain	Various	4,000	4,000	4,000	4,000	committed No further expansion
Portugal	Mibra, Brazil	Version	- Williams	13,300	13,300	Assumed start-up in 2018  No further expansion
Galaxy / GMC AMG	Mt. Cattlin, Australia	15,000	500	20,600	20,600	Restarted production in 2016, ramp-up to capacity in 2017
American Lithium	Canada	7. <b></b>		21,000	21,000	Assumed restart mid-2017
Mineral Assets North	Australia La Corne,			30,000	30,000	Shipping of DSO underway in 2017, upgrading facility under evaluation
Alliance	Bald Hill.	10,200	17,750	30,000	30,000	Jiniaer and Chaerhan salt lakes
China Brine	Canada Various		- 3	31,600	31,600	expected by 2021 Expansions planned at Dongta
Altura Nemaska	Pilgangoora, Australia Whabouchi,		- 5	32,500	32,500	Assumed start-up by 2019 Ramp-up to Phase 2 capacity
Orocobre	Olaroz, Argentina		17,250	35,000	35,000	Plan to double production capacity in 2020
FMC	Hombre Muerto, Argentina	19,000	26,000	40,000	40,000	Expected to expand capacity b 2021
China Mineral	Various	20,500	39,250	42,450	40,500	Small expansions only
SQM Pilbara Minerals	Pilgangoora, Australia	100	:•	25,000 46,500	50,000 46,500	Assumed start-up in 2019 Construction started, ramp-up to capacity by end-2018
Lithium Americas /	Cauchari		3,000	34,540	34,340	expansion expected by 2016
Process Minerals International	Mt Marion, Australia	101 \$100,000	5,000	54,340	54,340	Start-up of production in 2016 expansion expected by 2018
SQM	Atacama, Chile	40,000	60,000	60,000	60,000	Future expansion possible if new licenses granted
Albemarie	Atacama, Chile & Silver Peak, USA	25,000	33,000	86,000	86,000	Increasing capacity to accommodate larger extraction licence in Chile
Talison	Greenbushes, Australia	47,000	75,000	165,000	165,000	Doubling of capacity planned by 2020

(1) Estimates made prior to announcement of SQM and ALB's deal with CORFO



## **Project Summary** | Key investment takeaways

## **Emerging Vertically Integrated Low-Cost Lithium Producer in a Premier Jurisdiction**

1

Proven production process

2

Near term commercial producer of lithium compounds 3

To become the lowest cost producer of lithium hydroxide

4

World-class counterparties

5

Unique location and process of processing lithium







