

25 February 2020

Investor Presentations

MELBOURNE, Australia – Clean TeQ Holdings Limited (**Clean TeQ** or **Company**) (ASX/TSX:CLQ; OTCQX:CTEQF) is pleased to advise that Managing Director and CEO Mr Sam Riggall will be presenting at the BMO Capital Markets 29th Annual Global Metals & Mining Conference in Florida and hosting a number of investor meetings in North America during 25-26 February. Mr Riggall's presentation materials are attached.

For more information, please contact:

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This announcement is authorised for release to the market by the Board of Directors of Clean TeQ Holdings Limited.

About Clean TeQ Holdings Limited (ASX/TSX: CLQ) – Based in Melbourne, Australia, Clean TeQ is a global leader in metals recovery and industrial water treatment through the application of its proprietary Clean-iX® continuous ion exchange technology. For more information about Clean TeQ please visit the Company's website www.cleanteq.com.

About the Clean TeQ Sunrise Project – Clean TeQ is the 100% owner of the Clean TeQ Sunrise Project, located in New South Wales. Clean TeQ Sunrise is one of the largest cobalt deposits outside of Africa, and one of the largest and highest-grade accumulations of scandium ever discovered.

About Clean TeQ Water – Through its wholly owned subsidiary Clean TeQ Water, Clean TeQ is also providing innovative wastewater treatment solutions for removing hardness, desalination, nutrient removal, zero liquid discharge. The sectors of focus include municipal wastewater, surface water, industrial waste water and mining waste water. For more information about Clean TeQ Water please visit www.cleanteqwater.com.



Sunrise Battery Materials Complex

**Building a sustainable
supply chain for electric
vehicles**

BMO Metals & Mining Conference

February 2020



TSX CLQ

Cautionary statement



Certain statements in this presentation constitute “forward-looking statements” or “forward-looking information” within the meaning of applicable securities laws. Such statements involve known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements of Clean TeQ Holdings Limited (the “Company” or “Clean TeQ”), the Clean TeQ Sunrise Project (“Sunrise”, the “Project” or the “Sunrise Project”), or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as “may”, “would”, “could”, “will”, “intend”, “expect”, “believe”, “plan”, “anticipate”, “estimate”, “scheduled”, “forecast”, “predict” and other similar terminology, or state that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved. These statements reflect the Company’s current expectations regarding future events, performance and results, and speak only as of the date of this presentation.

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In addition, all disclosure in this or other presentations related to the results of the Sunrise Project’s Definitive Feasibility Study (the “DFS”) announced on June 25, 2018, constitute forward-looking statements and forward-looking information. The forward-looking statements includes metal price assumptions, cash flow forecasts, projected capital and operating costs, metal recoveries, mine life and production rates, and the financial results of the DFS. These include statements regarding the Sunrise Project IRR; the Project’s NPV (as well as all other before and after taxation NPV calculations); life of mine revenue; average annual EBITDA; capital cost; average C1 operating cash costs before and after by-product credits; proposed mining plans and methods, the negotiation and execution of offtake agreements, a mine life estimate; project payback period; the expected number of people to be employed at the Project during both construction and operations and the availability and development of water, electricity and other infrastructure for the Sunrise Project, as well as the indicative project schedule.

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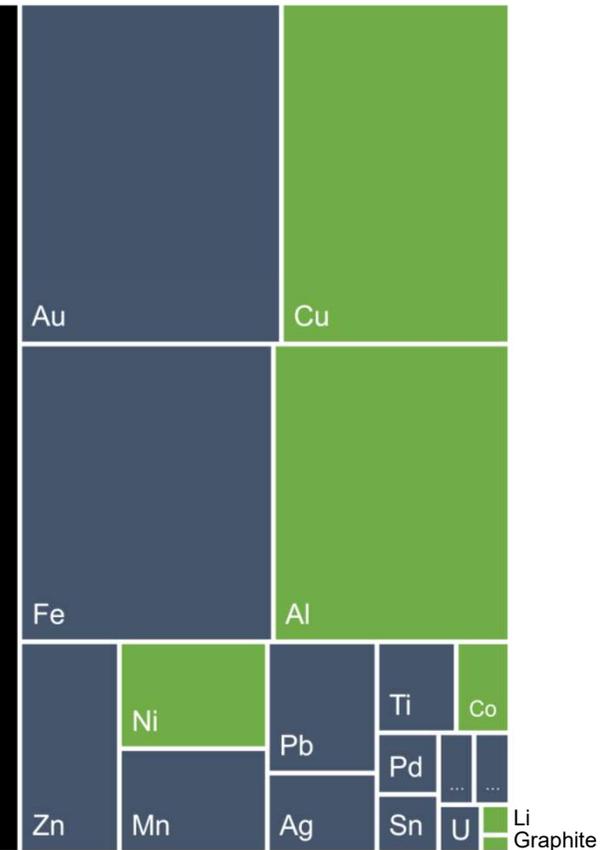
Streamlined Life Cycle Analysis by Energetics, Feb 2020. The GHG emission intensities of alternative processing routes are based on literature data that cannot be effectively harmonized. For comparison purposes the only harmonization that has occurred has been on end product (NiSO₄) and using economic allocation to end products. Any comparison against Sunrise should be considered indicative only.

Decarbonisation – the industrial challenge of this century

Metals are the new oil – for electrical generation, storage, distribution and light-weighting

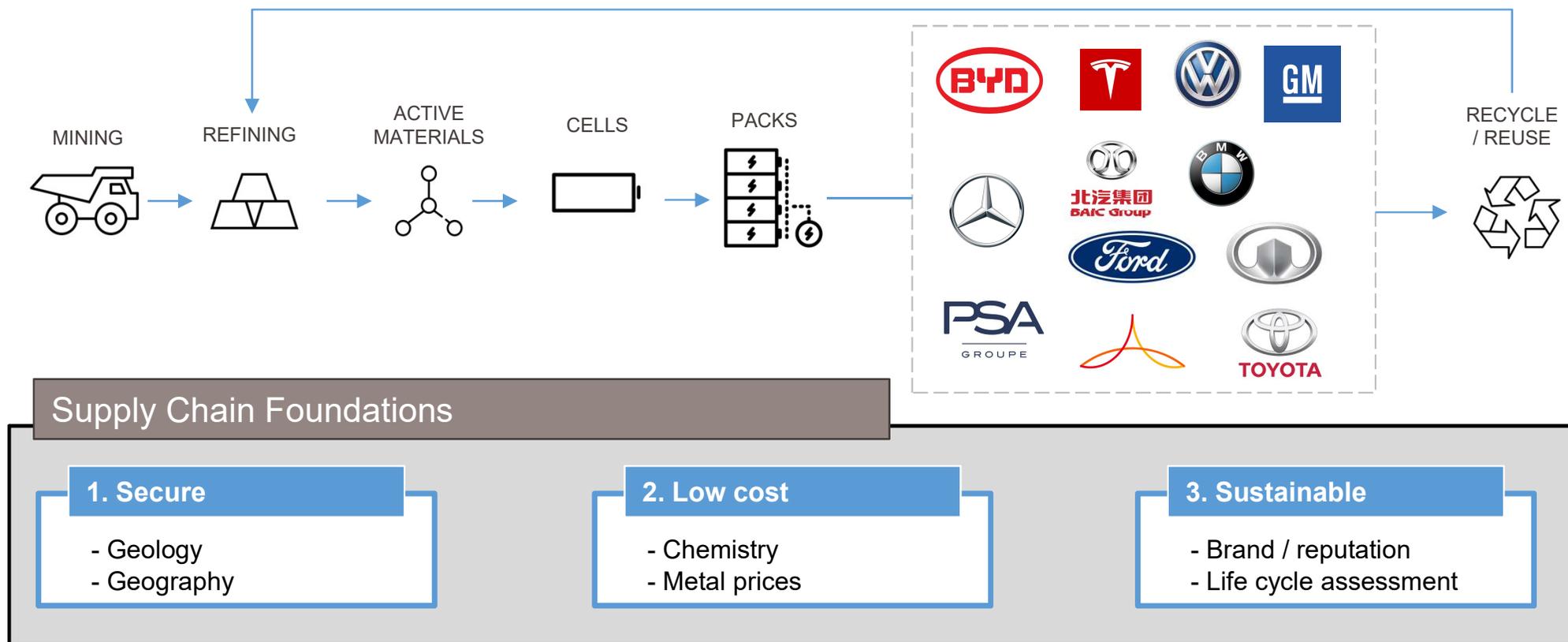
To scale - area represents global market value of the commodity

Oil



Reinventing the supply chain

Raw materials are the most vulnerable part of the EV supply chain



Supply Chain Foundations

1. Secure

- Geology
- Geography

2. Low cost

- Chemistry
- Metal prices

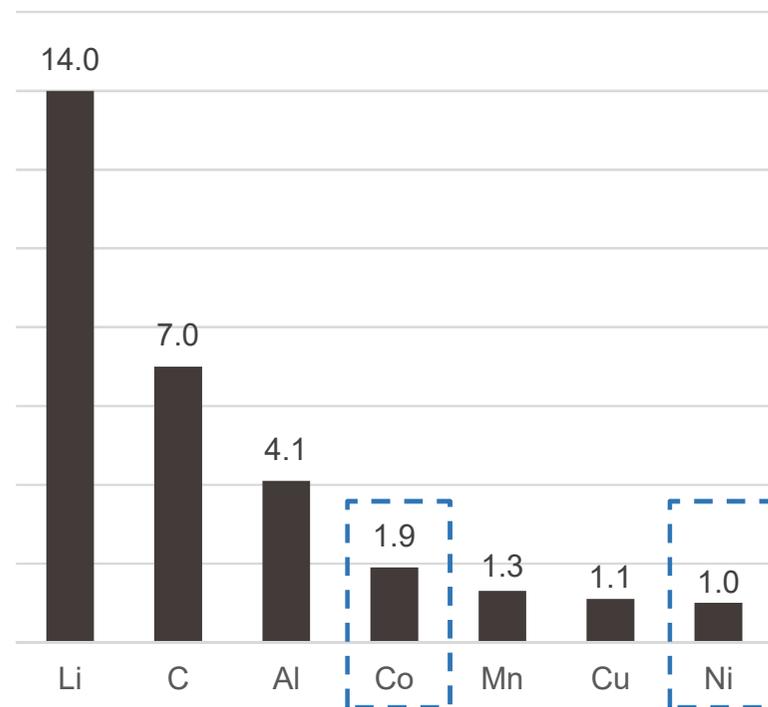
3. Sustainable

- Brand / reputation
- Life cycle assessment

Ore reserves and production rates

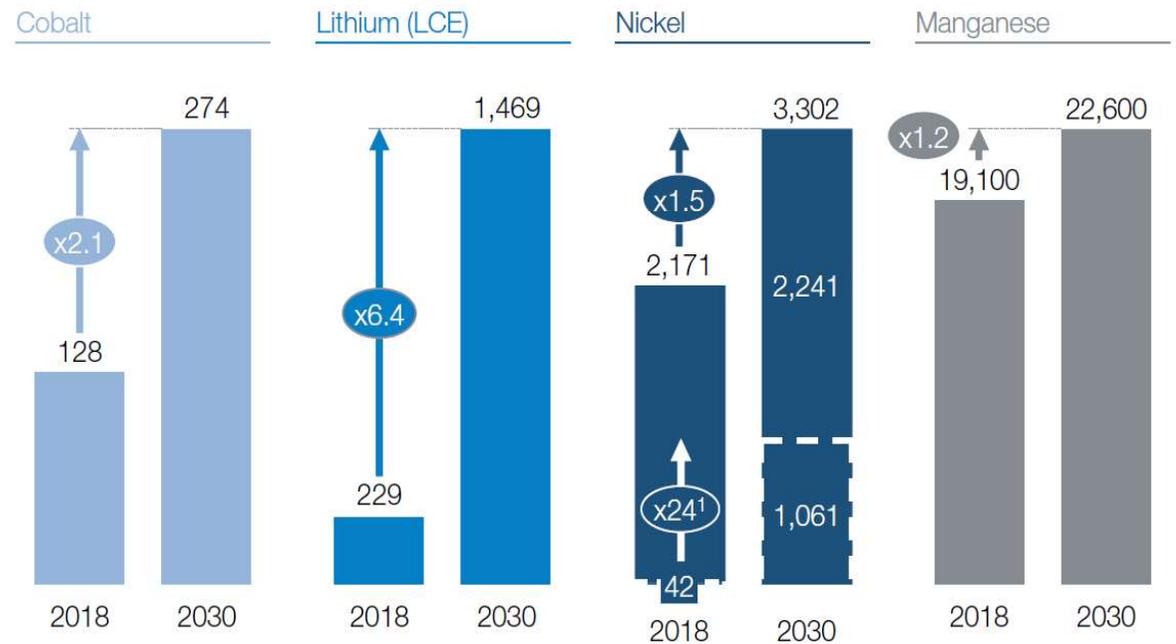
Metal markets area function of geological scarcity and demand

Implied 30-Year Reserve Life as Multiple of Current Production



Source: USGS; Bernstein

Raw material demand in kilo tonnes per annum, base case



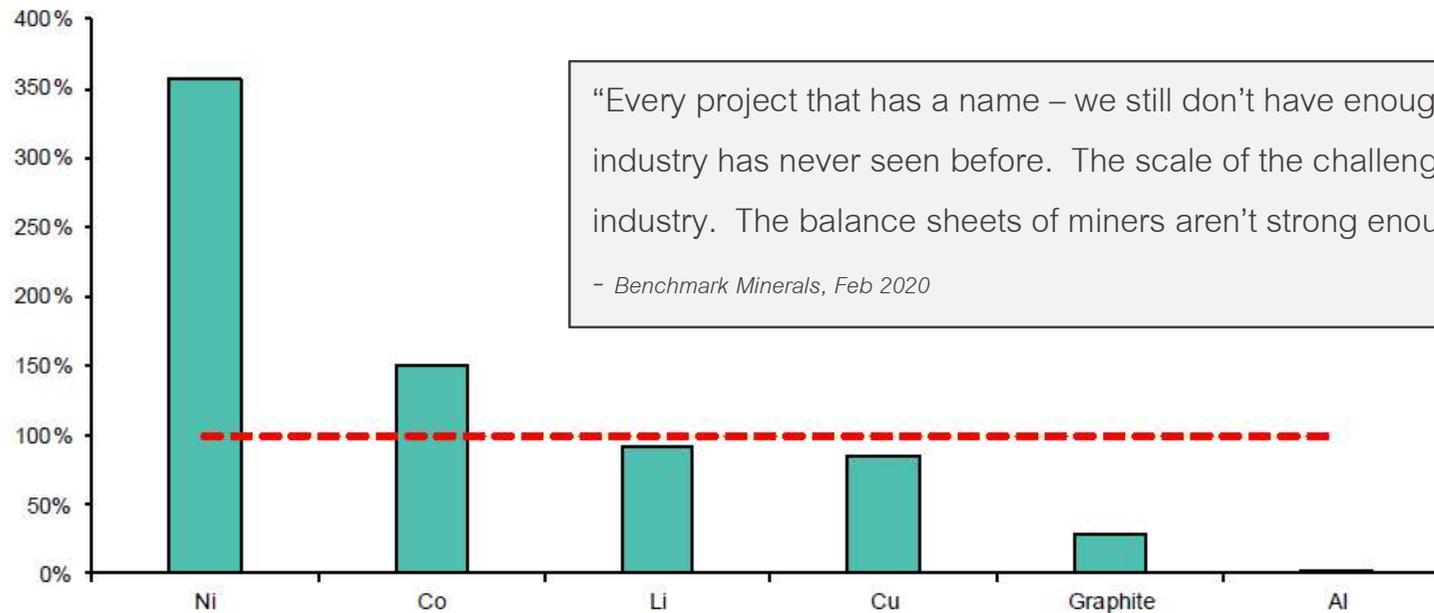
Source: Global Battery Alliance, WEF; McKinsey analysis

¹ Demand for class 1 nickel for batteries

Reserve depletion rates

Projected EV stock by 2050 will have a huge impact on ore reserve depletion rates

EV Raw Material Bottleneck - % of Available Global Reserves Required to Deliver EV Stock by 2050



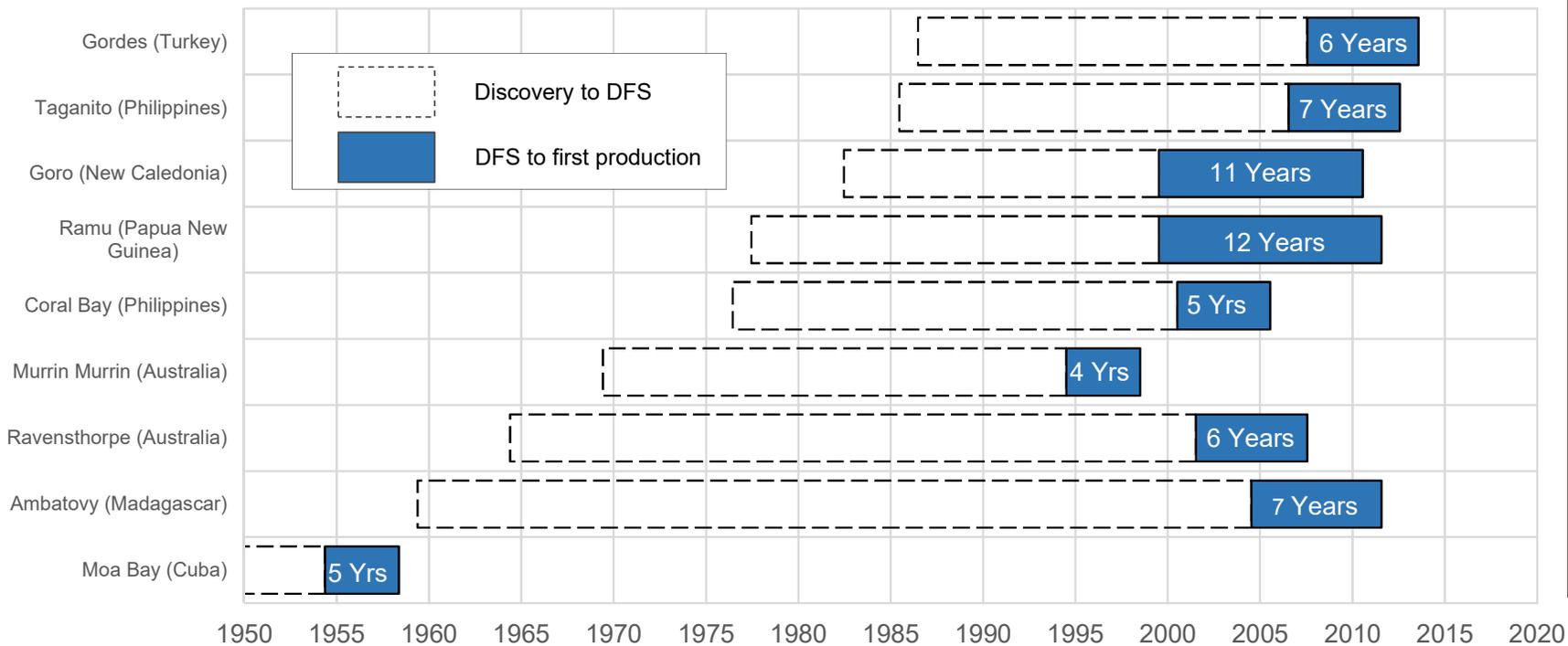
“Every project that has a name – we still don’t have enough. These are growth rates the mining industry has never seen before. The scale of the challenge hasn’t really set in for people in the industry. The balance sheets of miners aren’t strong enough to support this level of growth.”
- Benchmark Minerals, Feb 2020

Source: USGS, SNL Financial, CRU, Wood Mackenzie, and Bernstein estimates (2050) and analysis

Development timeframes

Building new nickel / cobalt capacity takes time

Development Time for Existing PAL Operations



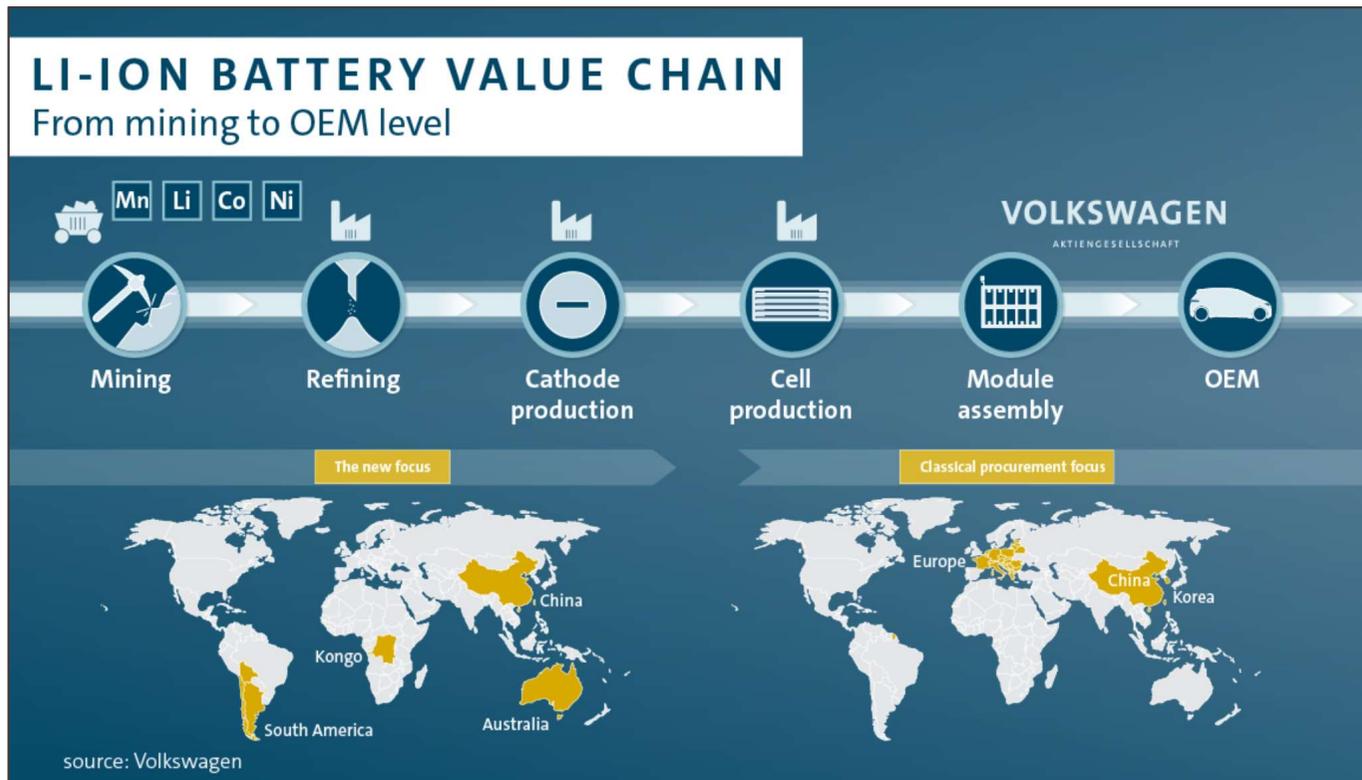
Source: SNL and public data

“These are markets that really need consistent investment – mines don’t build themselves. You can’t turn on that supply in 1 to 2 years. The price levels we’re seeing now aren’t enough to incentivise that.”

- Benchmark Minerals, Feb 2020

Battery materials are geographically concentrated

Concentration increases supply risk



Cobalt

| | | |
|--------------------|-------|-----|
| Mine supply | DRC | 72% |
| Refined Production | China | 65% |

Nickel

| | | |
|--------------------|-----------|-----|
| Mine supply | Indo/Phil | 39% |
| | Russia | 12% |
| Refined Production | China | 29% |
| | Russia | 23% |

Lithium

| | | |
|--------------------|-----------|-----|
| Mine supply | Australia | 62% |
| | Chile | 18% |
| Refined Production | China | 54% |
| | Chile | 37% |

Source: USGS and internal analysis. Refined production refers to cobalt chemical production, Class 1 nickel and Li₂CO₃ and LiOH production.

Supply Chain Foundations

1. Secure

- Geology
- Geography

2. Low cost

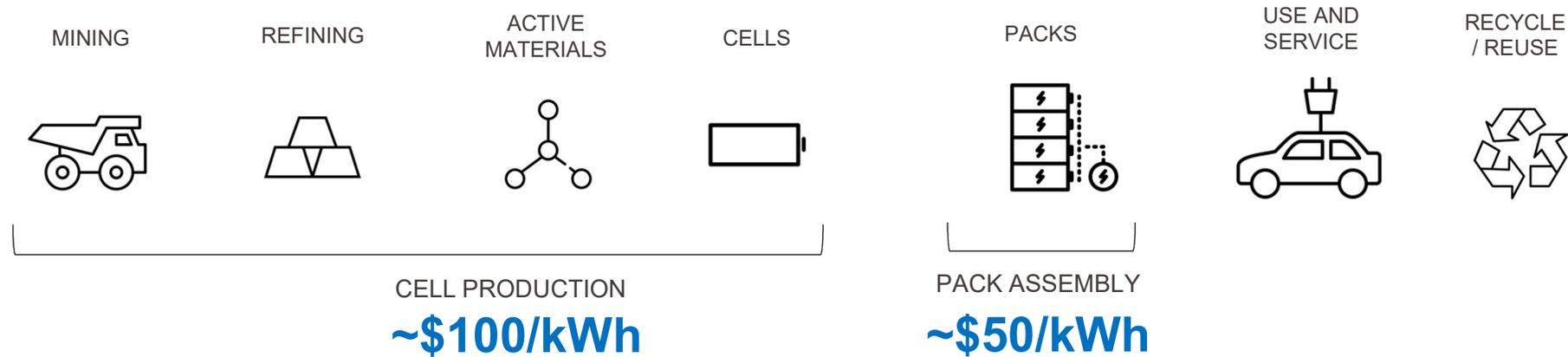
- Chemistry
- Metal prices

3. Sustainable

- Brand / reputation
- Life cycle assessment

Battery pack costs are declining rapidly...

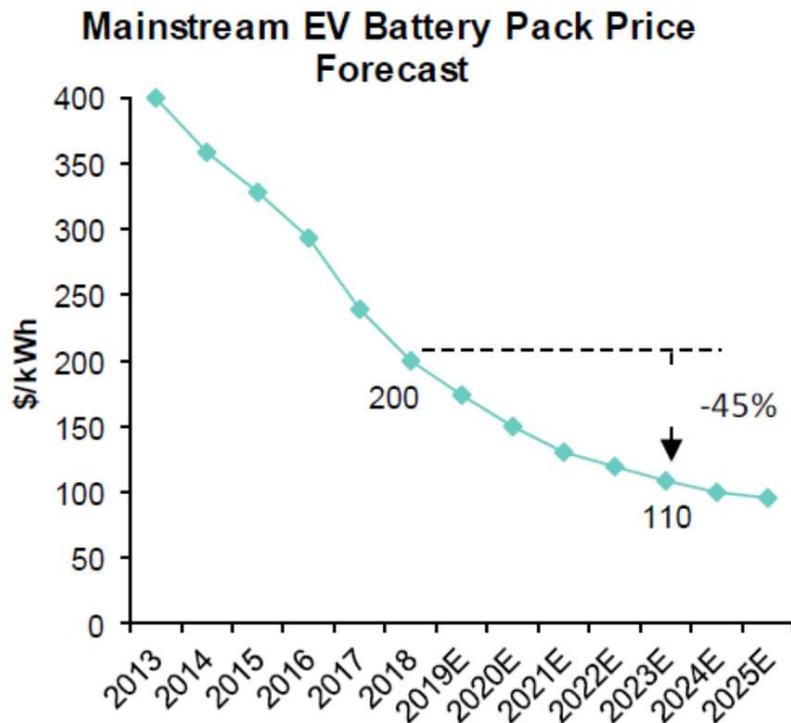
Cost parity with ICEs is approaching fast



Source: Internal company analysis validated against various studies (GREET; ANL BatPac Model; Avicenne; BNEF; Bernstein). Note: \$/kWh figures are calculated at pack level, not cell level and are not inclusive of corporate overheads, R&D expenses and margins.

... but the benefits from economies of scale will diminish

Forecasting ICE-parity by middle of this decade



Source: SNE Research, and Bernstein estimates and analysis (Global Energy Storage & Electric Vehicles team)

The largest contributing factors to battery pack unit cost reductions have been:

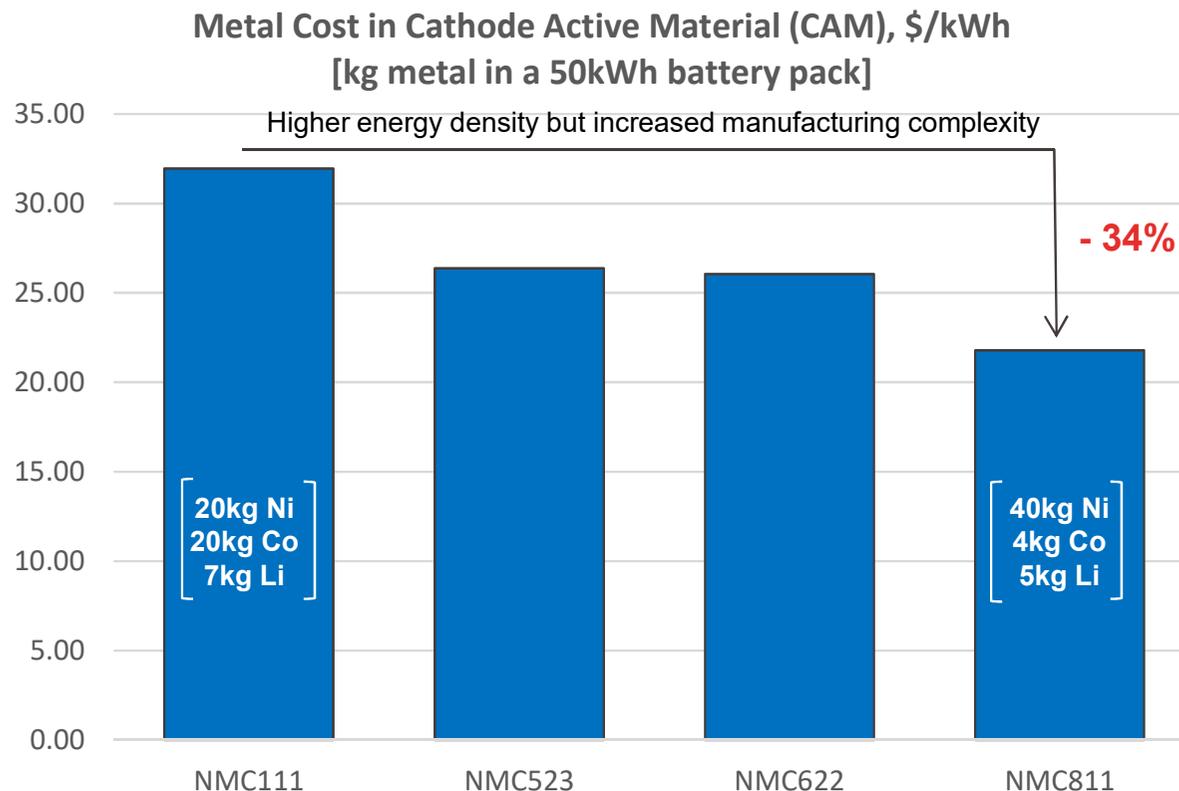
- Economies of scale in production
- Increased energy density (chemistry)

Economies of scale will taper over coming years

Chemistry and materials science remain large areas of improvement

Cathode chemistry has trade-offs

Cobalt thrifting – a case study in shifting risk



Benefits in chemistry, however, come with other trade-offs:

- Life cycle and safety
- Higher cost production materials and processes

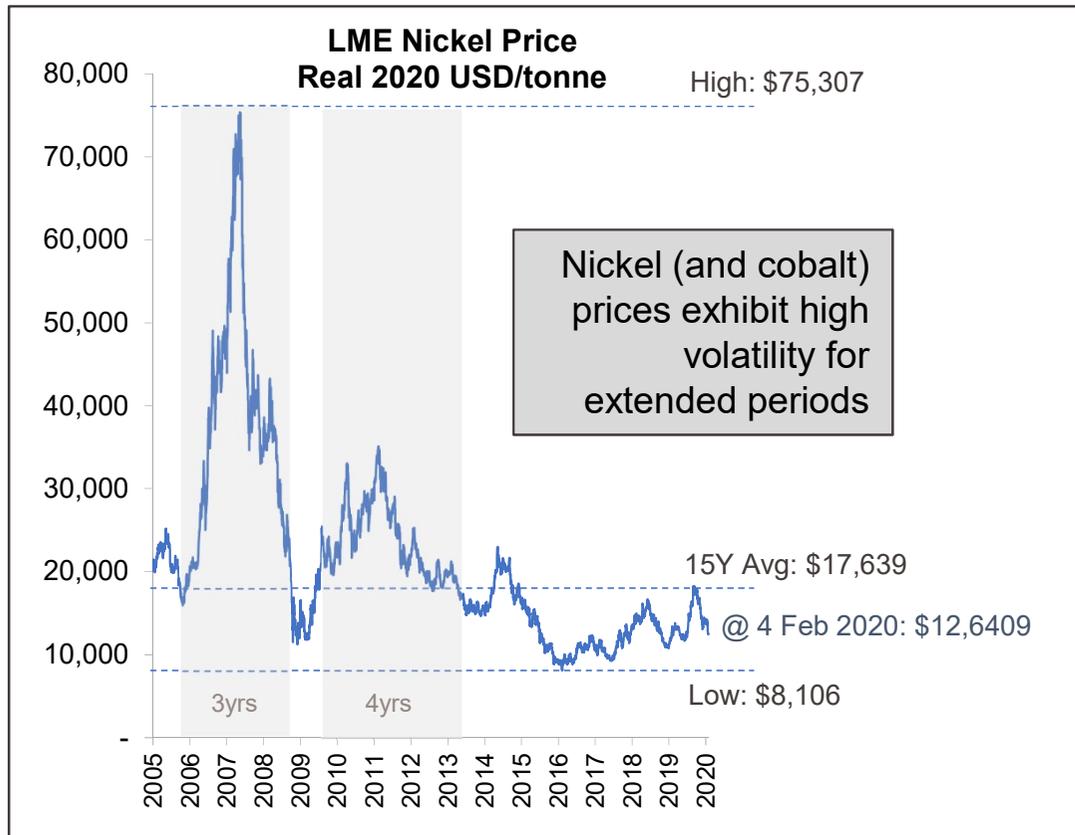
By thrifting cobalt (NMC111 to NMC811) you shift pricing risk to nickel

In both NMC111 and NMC811, nickel and cobalt make up **75%** of total metal cost in active material (thrifting does no more than shift risk between metals)

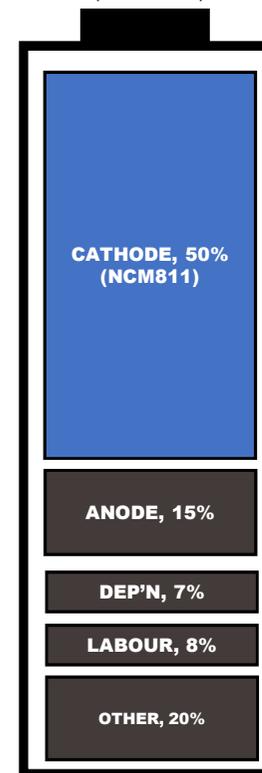
Note: Excludes manganese, which is immaterial for the analysis. Assumes long-term market consensus metal prices as at 6 Feb 2020.

Metal price volatility - a significant risk

Unless OEMs manage metal price volatility, cost competitiveness is rapidly eroded



Cell Cost Breakdown (\$/kWh)
(NMC811)



| Price Scenarios | Cost of Ni + Co |
|--|--------------------------|
| 1. Spot (\$15k/t Ni, \$39k/t Co) | \$13.00 / kWh |
| 2. Consensus (\$18.5k/t Ni, \$50k/t Co) | \$16.30 / kWh (+25%) |
| 3. High Ni (\$30k/t Ni, \$50k/t Co) | \$24.00 / kWh (+85%) |
| 4. High Ni & Co (\$30k/t Ni, \$77k/t Co) | \$26.20 / kWh (+102%) |

For an OEM producing 1 million EVs per annum with a 50kWh battery pack, Ni / Co price volatility erodes up to \$660M pa of value between scenarios 1 and 4

Source: LME. Cell cost breakdowns based on internal company analysis.

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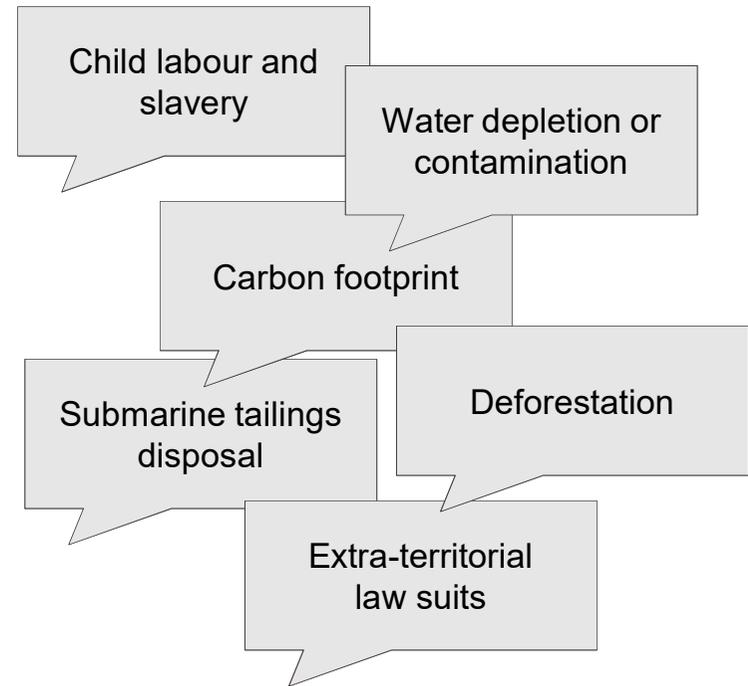
- Brand / reputation
- Life cycle assessment

New supply chains create brand and reputation risk

Moral hazard: should these risks be contracted out to third party agents?



Brand, Reputation & ESG



Carbon – a life cycle analysis of CO2 intensity

EVs must be designed around the battery if they are to deliver benefits to society



Source: Volkswagen

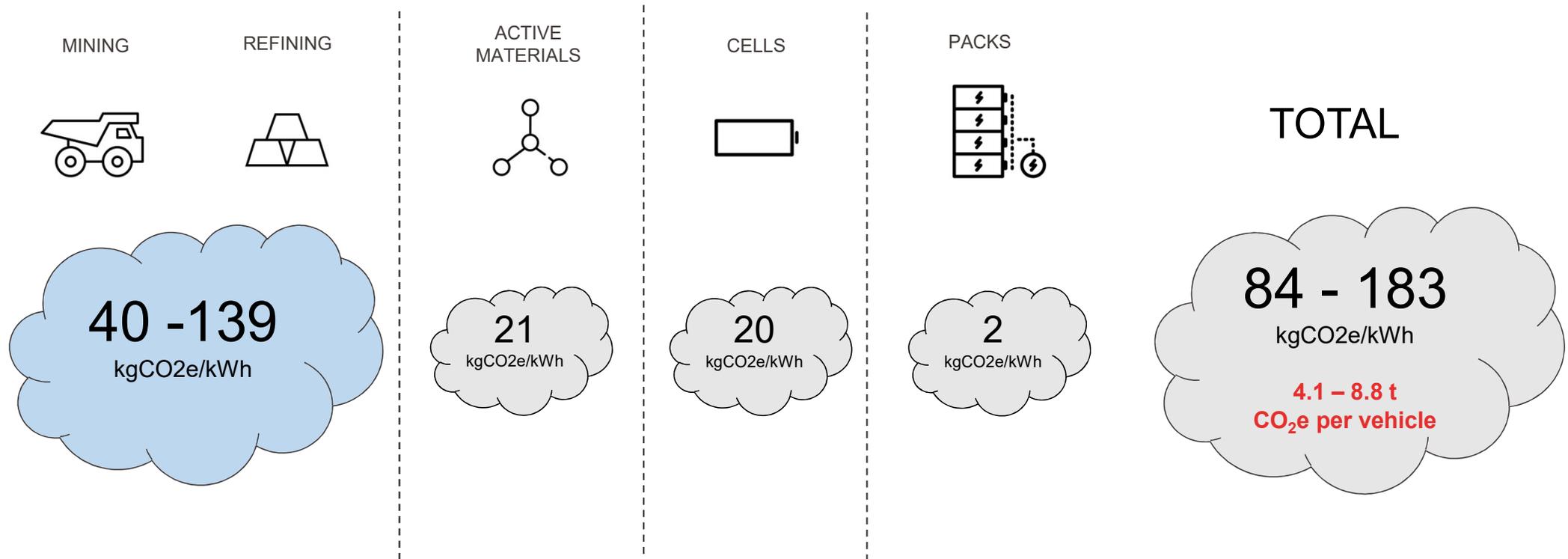
Raw materials (mining and processing) in the battery leave the biggest CO₂ footprint on the supply chain

OEMs need measurable carbon data to benchmark performance

Nickel and cobalt are the major contributors to an EV's carbon footprint, which varies widely depending on the source of metal and the processing route

Nickel and cobalt – why they are so important

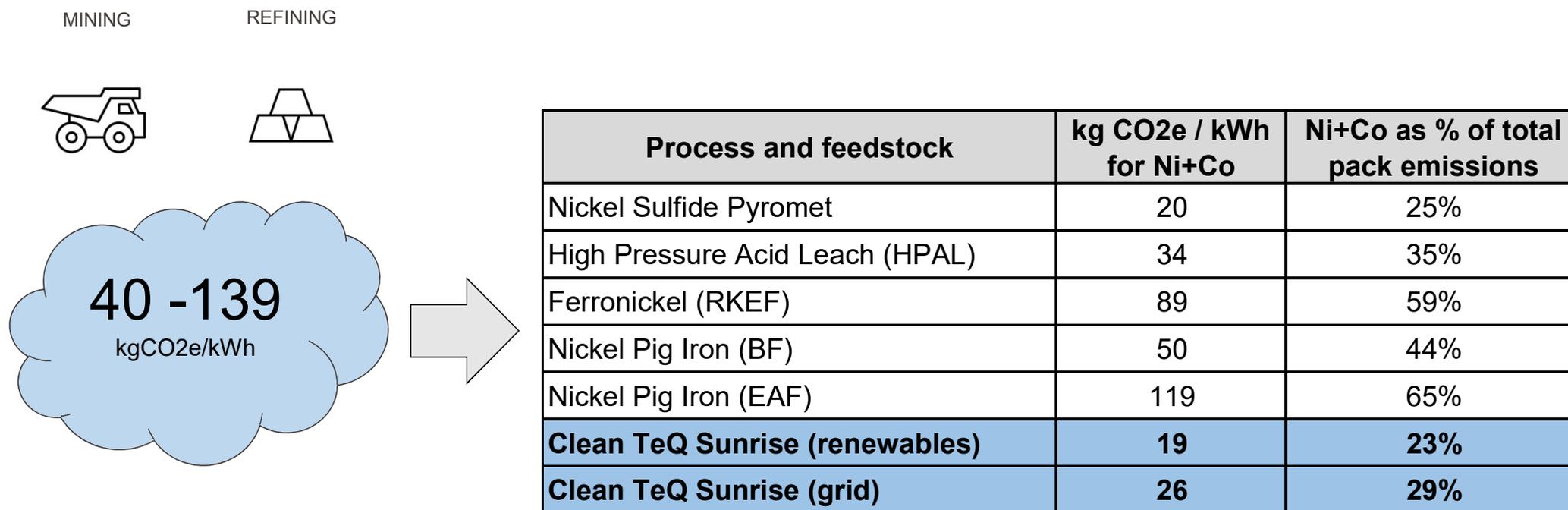
The carbon footprint of the battery pack is determined by mining/refining process routes....



Source: Energetics report and internal company analysis (GREET; ANL BatPac Model; Avicenne; Bernstein), modified to reflect the kg CO₂e per kWh of pack capacity utilizing NMC 811 cathode chemistry. Mining and Refining, assumes nickel and cobalt is refined through to nickel and cobalt sulfate for conversion to precursor. Electrical energy mix assumes FeNi and NPI production is in China, HPAL in Indonesia (using black coal) and NiS is in Australia. Note that the technology for conversion of FeNi or NPI to battery-grade sulfate has not been proven at industrial scale, may not be economically viable and may add further GHG emissions which have not been accounted for in this study. Total CO₂e production per vehicle assumes a 50kWh battery pack.

Strategic procurement matters

... where nickel and cobalt make up between one-quarter and two-thirds of total pack emissions



Source: See note on previous page. Sunrise range based on 100% renewable power supply versus Australian grid energy mix. Note that while a theoretical process was developed and evaluated to convert FeNi and NPI to battery grade sulfate, an industrial scale process has yet to be proven.



**CLEAN
TEQ**
SUNRISE

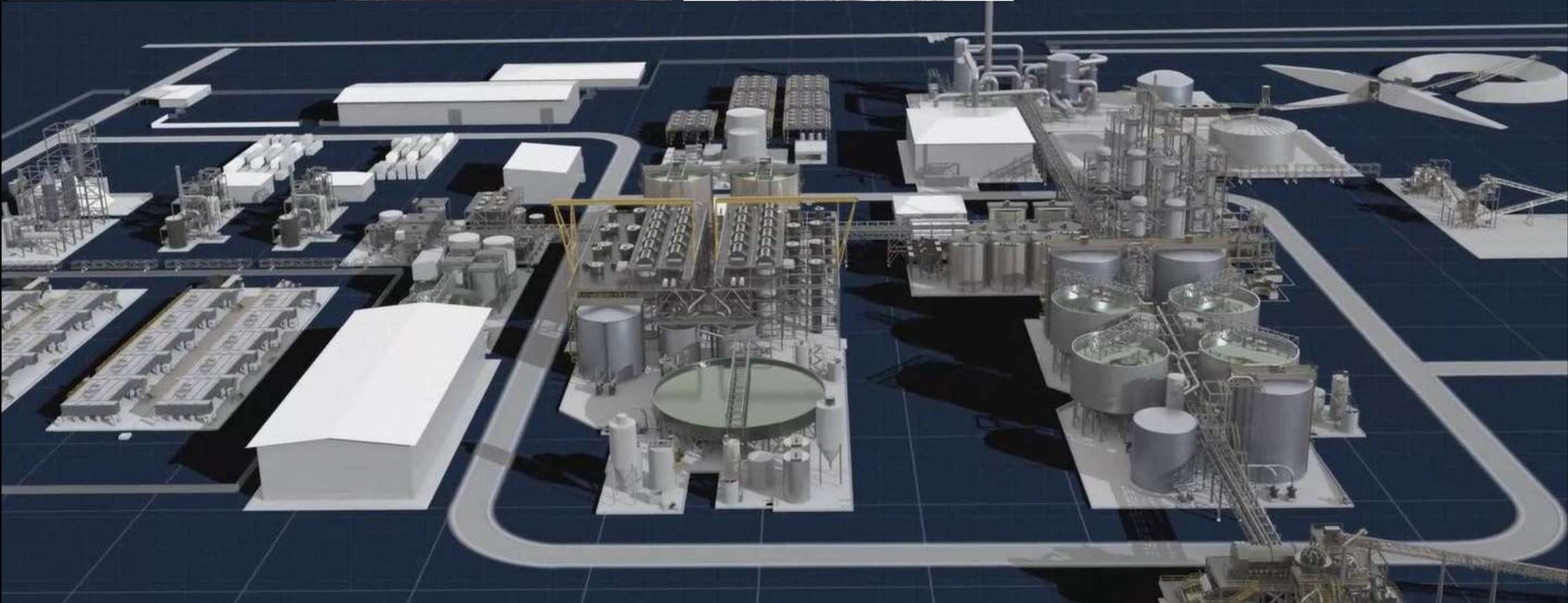
Sunrise Integrated Battery Complex

A template for industry-leading emissions and cost performance across the cathode supply chain

Large, low cost, long-life (and in Australia)

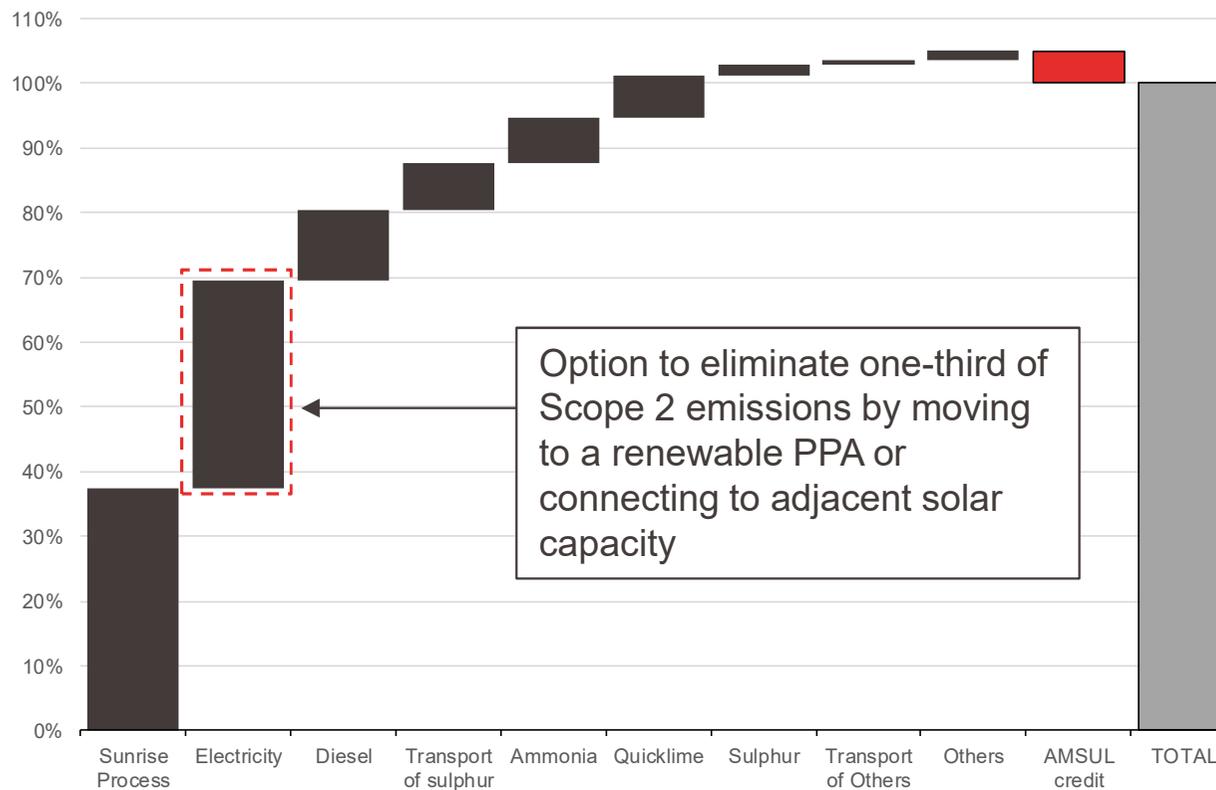


The focus is battery chemicals (metal salts and beyond)



Sunrise – a breakdown of CO2e hotspots

Integrating renewable power at Sunrise reduces carbon by circa 30%

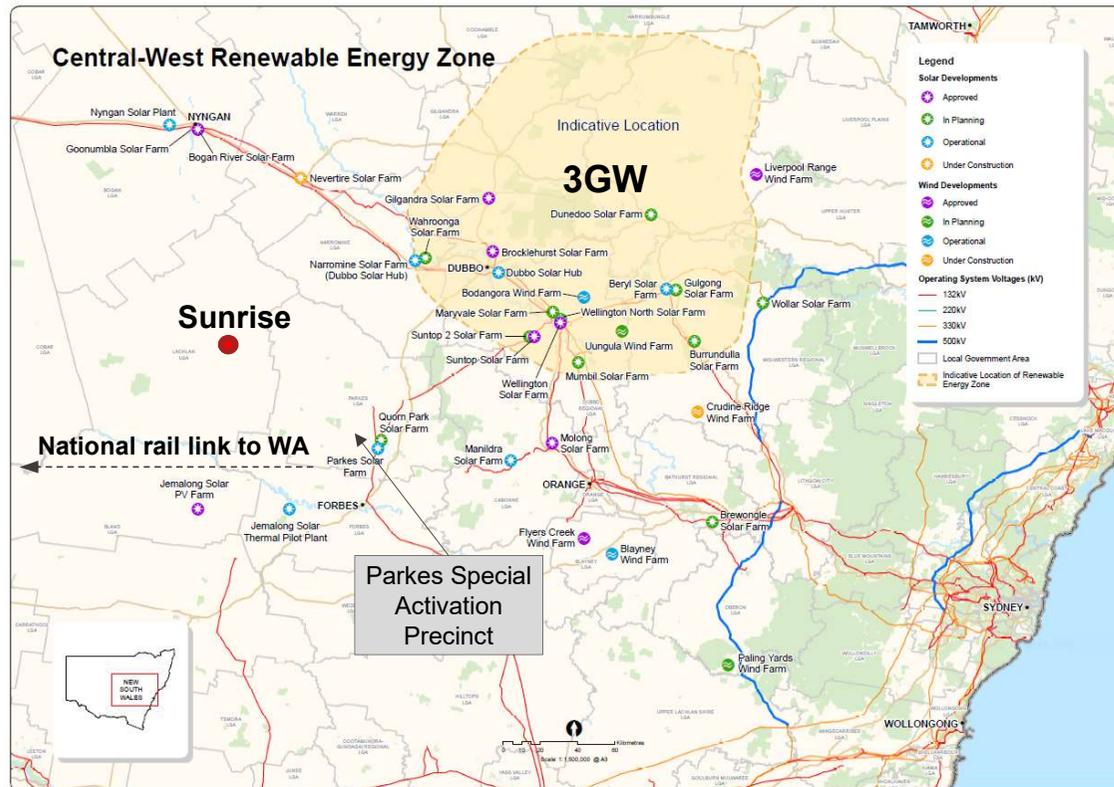


Source: Life Cycle Analysis by Energetics, February 2020.

| Indicator | Unit | Value |
|----------------------------------|-------------|-------|
| Sunrise (Imported Power) | | |
| Per kg Ni metal produced | kg CO2 e/kg | 17.2 |
| Per kg Co metal produced | kg CO2 e/kg | 45.4 |
| Per kg Sc metal produced | kg CO2 e/kg | 2,107 |
| Sunrise (Renewable Power) | | |
| Per kg Ni metal produced | kg CO2 e/kg | 10.8 |
| Per kg Co metal produced | kg CO2 e/kg | 28.4 |
| Per kg Sc metal produced | kg CO2 e/kg | 1,318 |

The vision for Sunrise and Central NSW

Integrated precursor / cathode production, renewable generation and recycling



Renewable Power: The Central-West Renewable Energy Zone (REZ) will add 3GW of new solar generation capacity to Sunrise’s doorstep

Linking Li – Ni - Co: The east-west national rail corridor connects at Parkes, linking Sunrise to the world’s largest sources of lithium production

Active material production: significant cost savings can be generated by co-locating Ni/Co sulfate and precursor/cathode production

Closed recycling loop: Surplus autoclave and refining capacity allows cost-effective recycling of used cathode to recover metals (Parkes Special Activation Precinct is a dedicated industrial zone incorporating recycling/re-use facilities powered by waste-to-energy).

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CLEAN
TEQ
Powering innovation



A focus on nickel in electric vehicle batteries

Understanding cost and the carbon footprint

BMO Metals & Mining, February 2020
Sam Riggall, CEO



TSX CLQ

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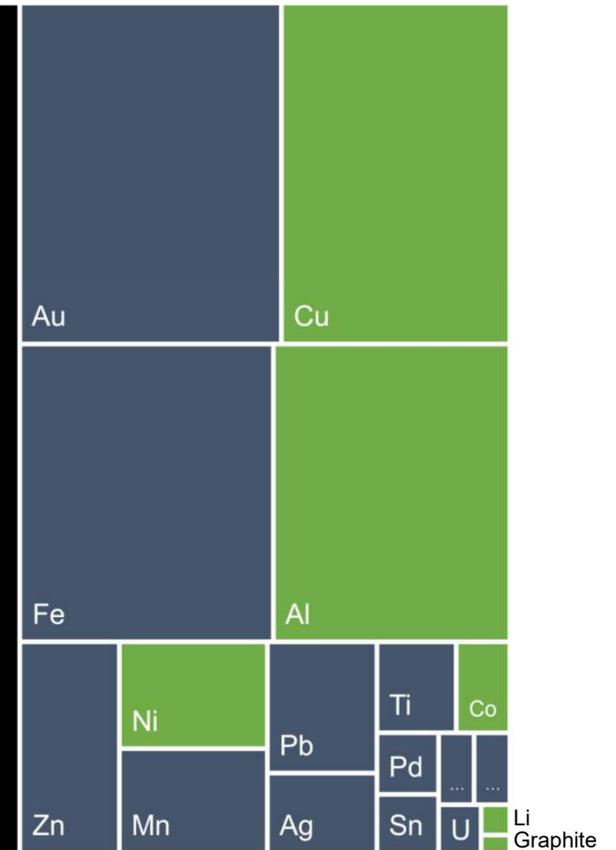
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Decarbonisation – the industrial challenge of this century

Metals are the new oil – for electrical generation, storage, distribution and light-weighting

To scale - area represents global market value of the commodity

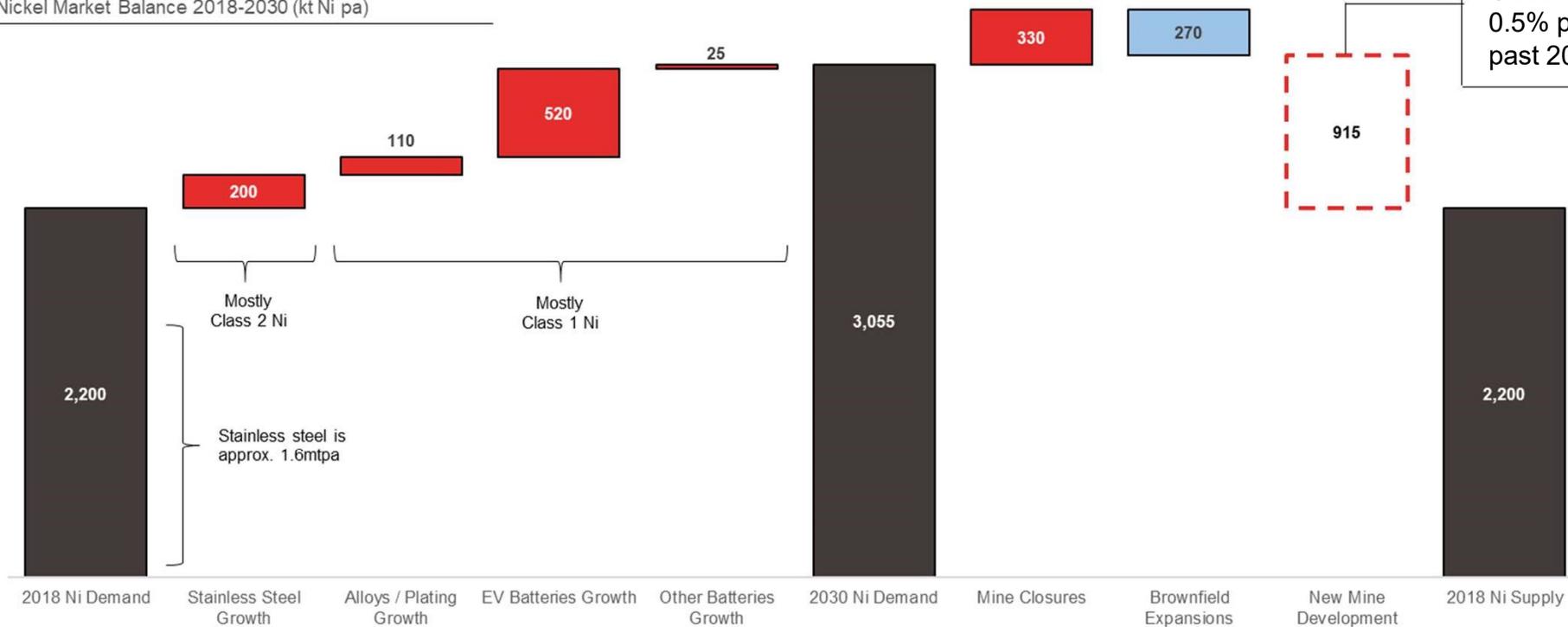
Oil



Nickel - mind the gap

Where will battery-grade nickel come from?

Nickel Market Balance 2018-2030 (kt Ni pa)

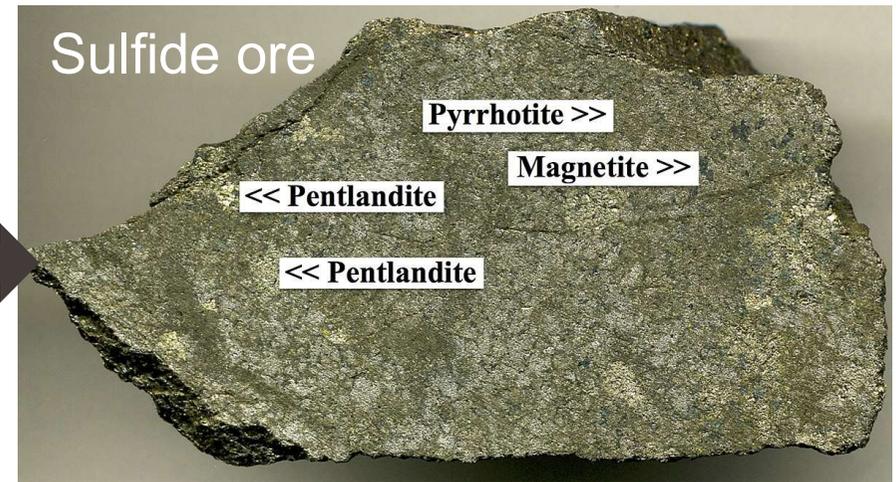


Implies 6% pa CAGR in Class 1 Nickel compared to 0.5% pa average over the past 20 years

Source: Internal analysis assuming 1.5% pa global passenger vehicle growth and a 15% EV penetration rate by 2030. Battery chemistry demand by 2030 is 90% split between NCM622 / NCM811 / NCA and 10% LFP. Average battery pack size is 50kWh. Stainless growth is 1% per year, Alloys / Plating growth is 1.5% per year. Mine closure and expansion data from Wood Mackenzie nickel market forecasts, September 2019. Forecast for PAL investment assumes industry standard capital intensity for 520ktpa of incremental LME Class 1 growth from laterite ore.

Nickel - ore styles and ore genesis

The economics of laterite and sulfide development rely on very different considerations, but....



- Grade
- Acid
- By-products
- Energy
- Cost
- Scarcity



Pyromet (RKEF):
FeNi, NPI



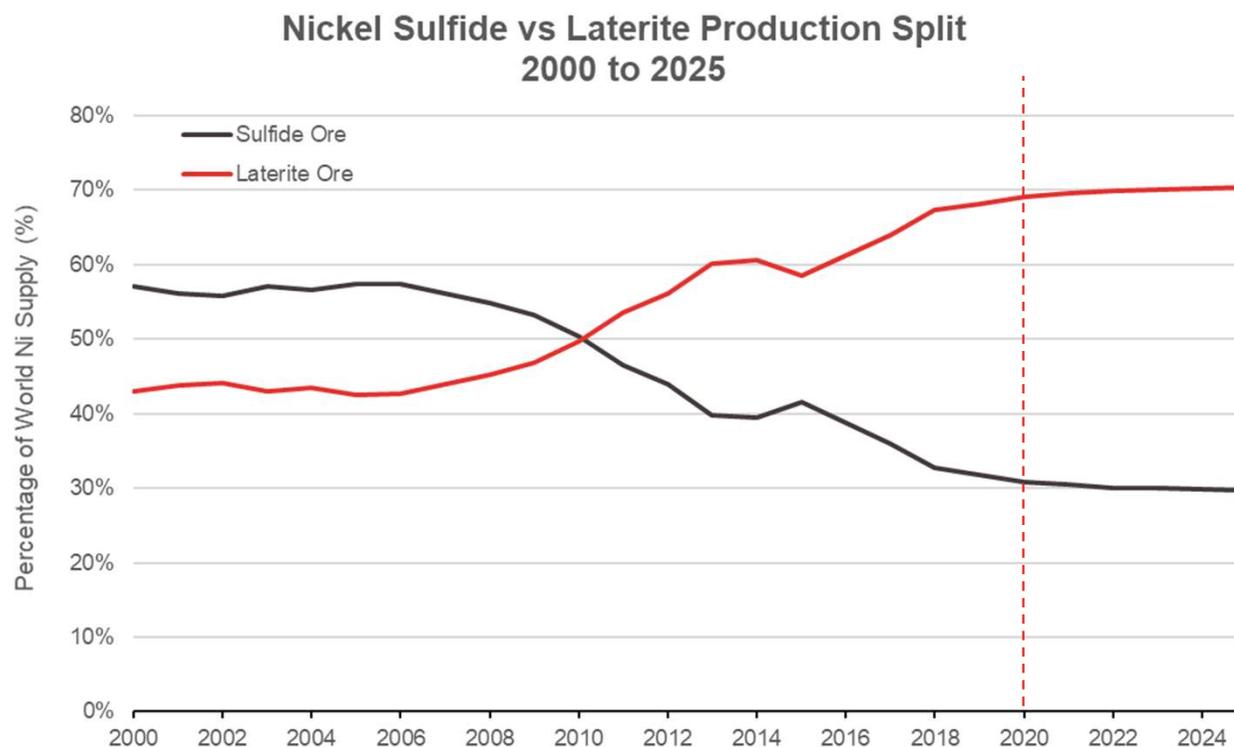
Hydromet (PAL):
MSP, MHP, sulfate eluate



Pyromet (smelt+refine):
Matte, LME metal (powder, briquette, cathode, etc)

Good nickel sulfide resources are geologically scarce

...laterites will need to do most of the heavy lifting to meet stainless and EV demand



Source: CRU Nickel & Cobalt Market Study, October 2018

- The world is increasingly dependent on nickel laterite ores
- Nickel sulfide resources are geologically scarce and insufficient to support forecast EV growth
- Pyrometallurgical processing of laterite ore will service stainless steel markets (NPI / FeNi)
- Hydrometallurgical processing of laterite ore (pressure acid leach, or PAL) will service battery markets

Feedstocks – many routes to nickel (and cobalt) sulfate

Cost and complexity are a function of impurity loads in the feedstock



Nickel Pig Iron
(Class 2)
8 - 16% Ni



FerroNickel
(Class 2)
20 - 25% Ni



MHP
(Intermediate)
~40% Ni / 1.5% Co



MSP
(Intermediate)
~60% Ni / 4.0% Co



Matte
(Intermediate)
~75% Ni / 1.5% Co



Sunrise Eluate
(Intermediate)
70% Ni / 18% Co



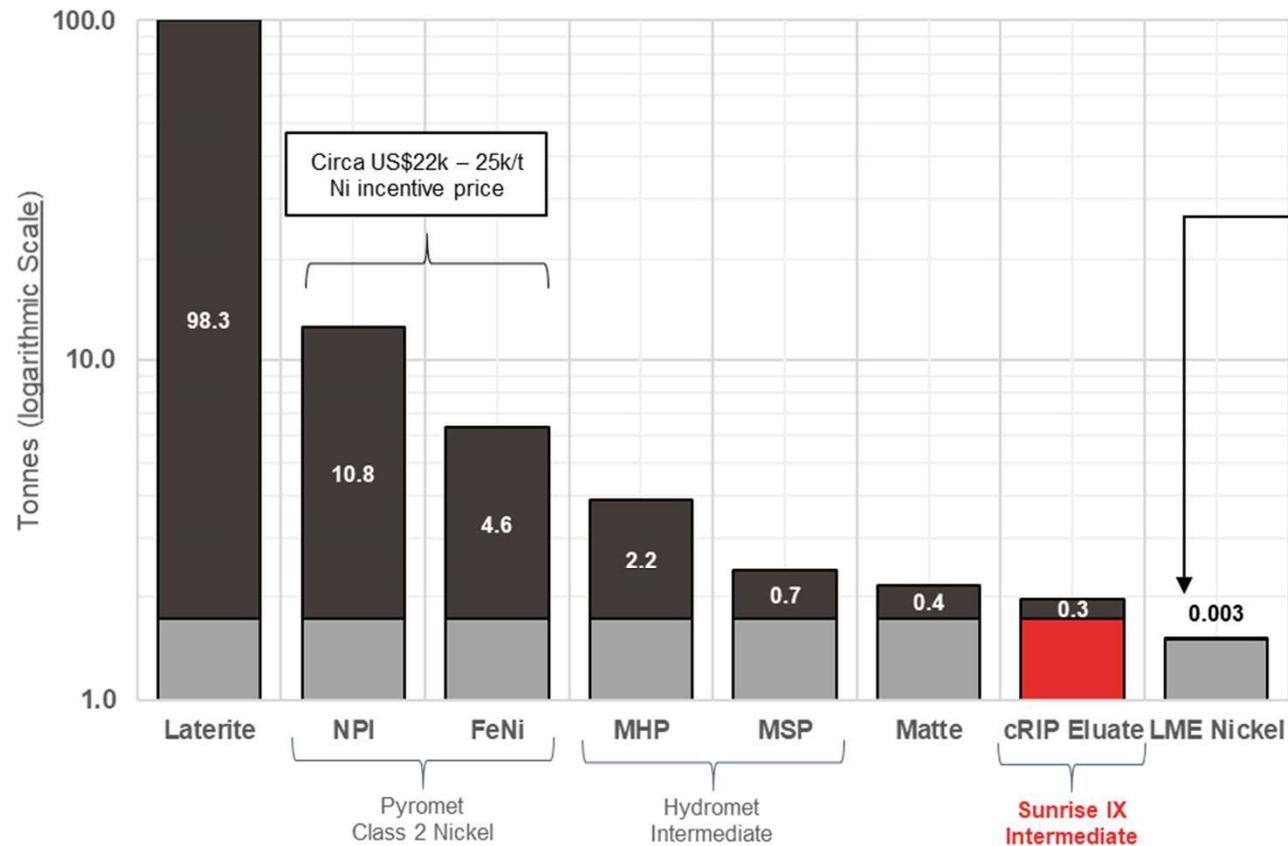
LME Ni
(Class 1)
99.8% Ni



Sunrise NiSO₄·6H₂O
(LiB High Purity)
99.94% Ni

Can FeNi and NPI plug the gap?

Impurities increase conversion costs to nickel / cobalt sulfate



1.5 tonne of LME-grade nickel contains ~3.0kg of impurities, of which ~2.1kg needs to be removed to produce battery-grade nickel sulfate

LiB grade NiSO₄·6H₂O



Assumes laterite grading 1.5% Ni and 0.075% Co. Nickel equivalent grade calculated using a US\$7.5/lb Ni price and a US\$22.5/lb Co price. cRIP eluate impurities include all compounds other than payable nickel, cobalt and sulphate mass. LME Nickel and LiB grade NiSO₄·6H₂O use nickel grade only, not nickel equivalent (hence a reduction in payable metal).

Carbon – a life cycle analysis of CO2 intensity

EVs must be designed around the battery if they are to deliver benefits to society



Raw materials (mining and processing) in the battery leave the biggest CO₂ footprint on the supply chain

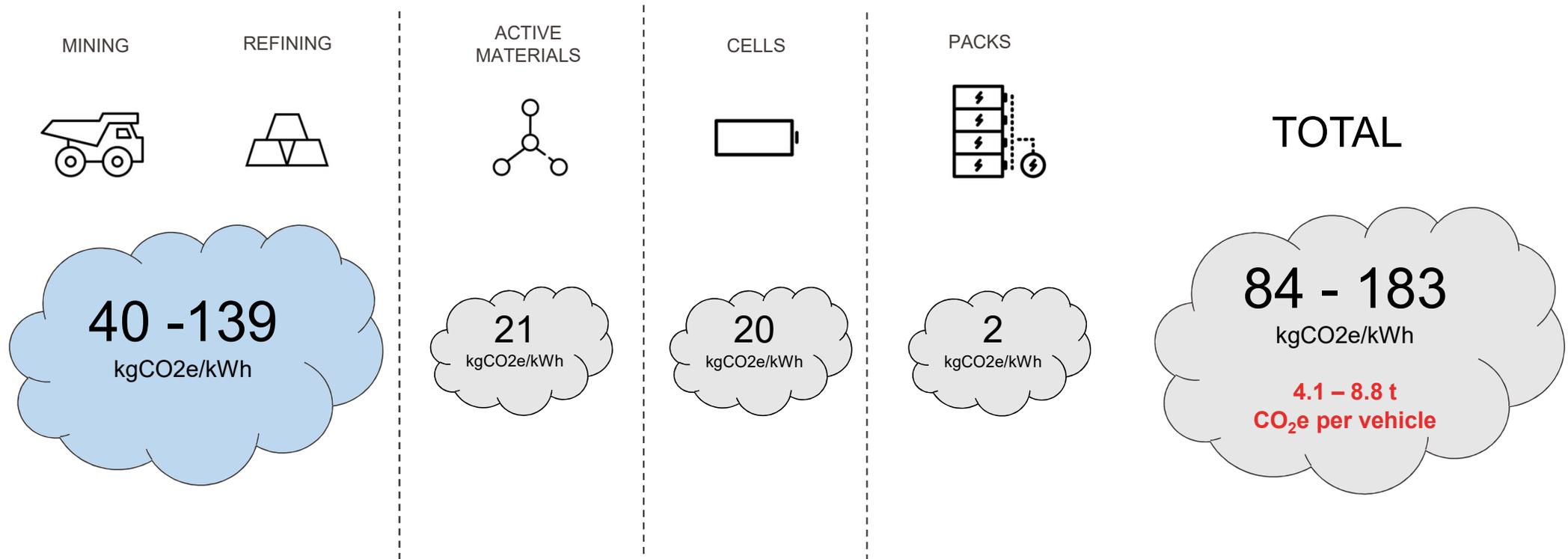
OEMs need measurable carbon data to benchmark performance

Nickel and cobalt are the major contributors to an EV's carbon footprint, which varies widely depending on the source of metal and the processing route

Source: Volkswagen

Carbon accounting for the battery supply chain

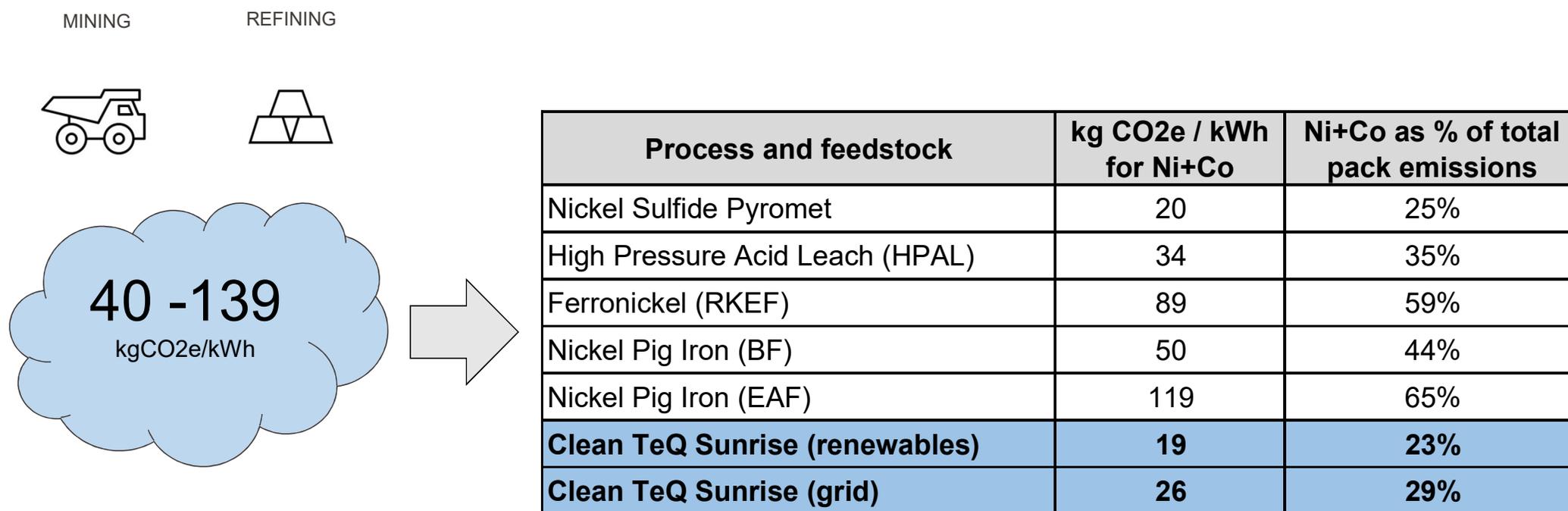
The carbon footprint of the battery pack is determined largely by mining/refining process routes....



Source: Energetics report and internal company analysis (GREET; ANL BatPac Model; Avicenne; Bernstein), modified to reflect the kg CO₂e per kWh of pack capacity utilizing NMC 811 cathode chemistry. Mining and Refining, assumes nickel and cobalt is refined through to nickel and cobalt sulfate for conversion to precursor. Electrical energy mix assumes FeNi and NPI production is in China, HPAL in Indonesia (using black coal) and NiS is in Australia. Note that the technology for conversion of FeNi or NPI to battery-grade sulfate has not been proven at industrial scale, may not be economically viable and may add further GHG emissions which have not been accounted for in this study.

Importance of nickel and cobalt

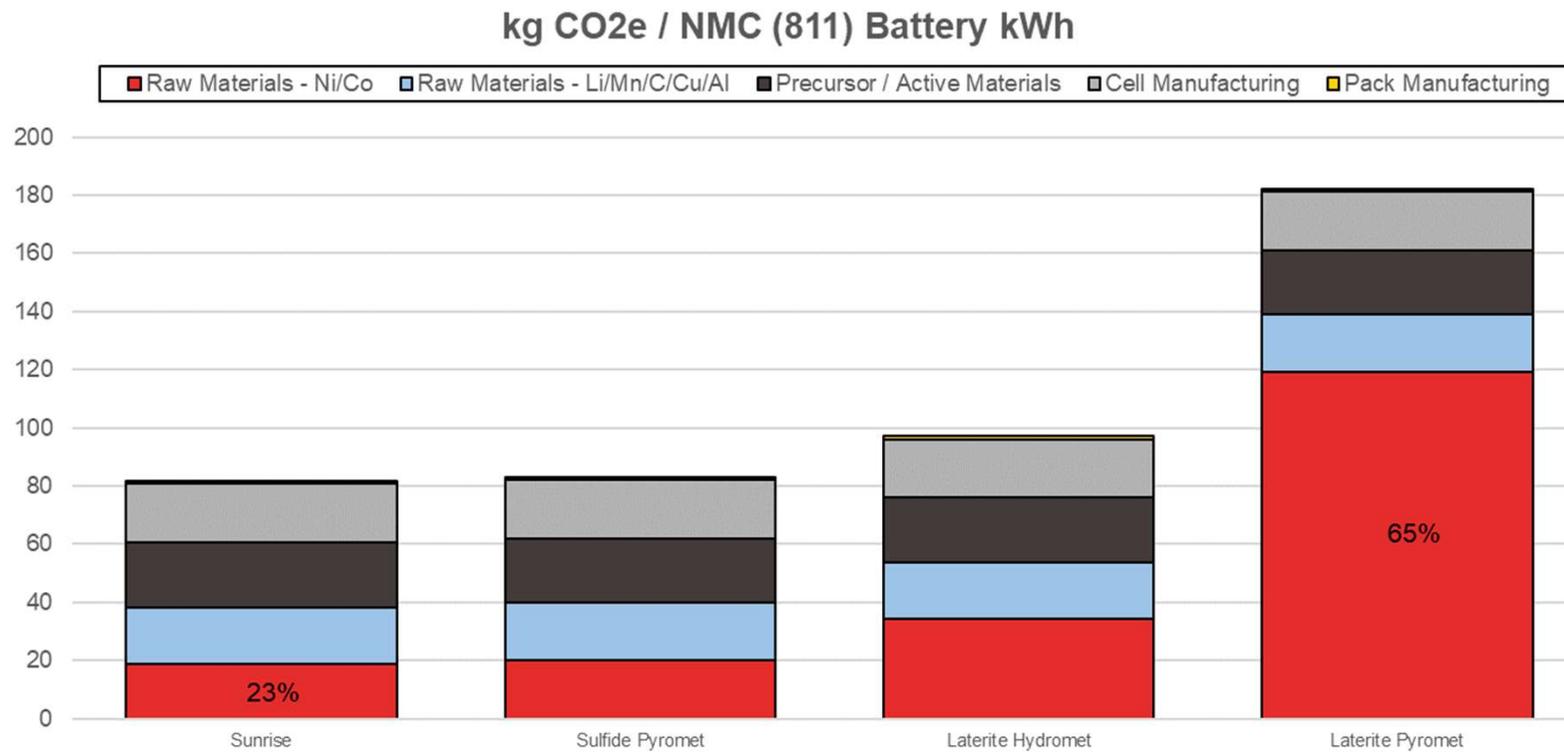
... where nickel and cobalt make up between one-quarter and two-thirds of total pack emissions



Source: See note on previous page. Sunrise range based on 100% renewable power supply versus Australian grid energy mix. Note that while a theoretical process was developed and evaluated to convert FeNi and NPI to battery grade sulfate, an industrial scale process has yet to be proven.

Nickel sulfate process routes

The environmental promise of EVs depends greatly on procurement strategy



Source: See note on previous page. Sunrise emissions based on renewable electricity supply.



**CLEAN
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SUNRISE

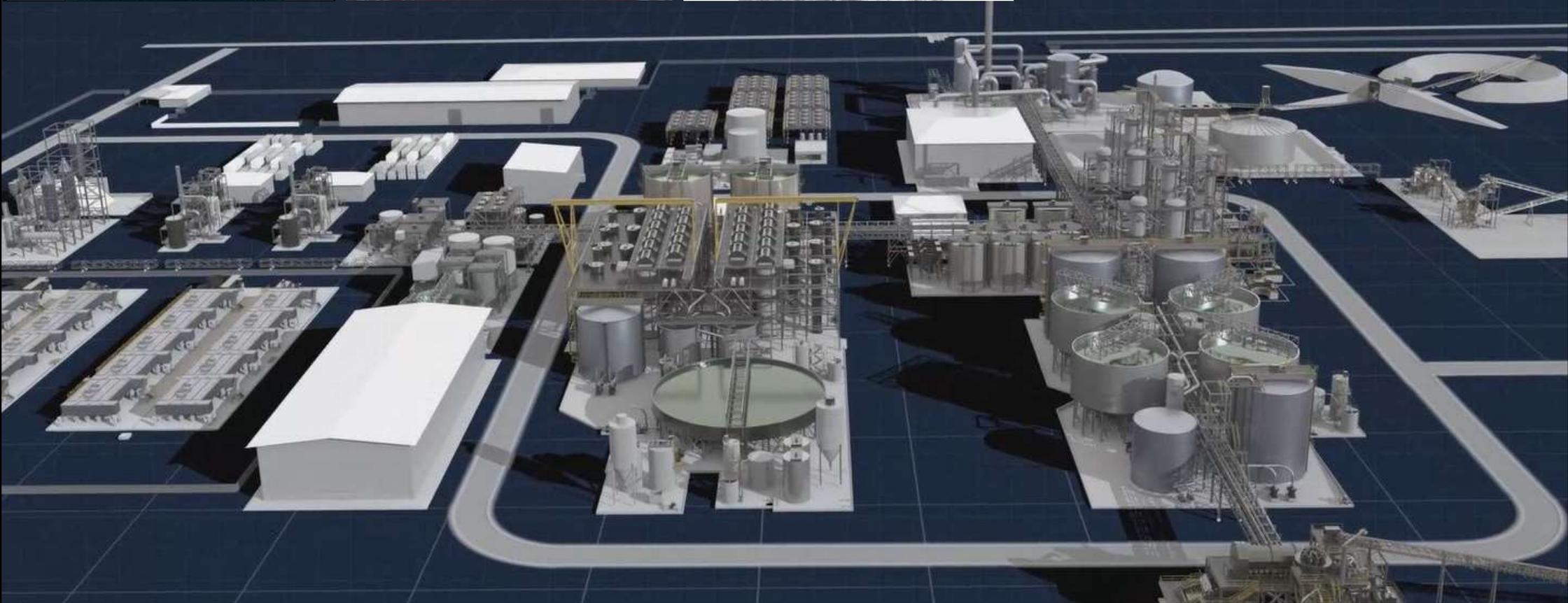
Sunrise Integrated Battery Complex

A template for industry-leading emissions and cost performance across the cathode supply chain

Sunrise Battery Materials Complex



Sunrise Battery Materials Complex



GHG intensity of Clean TeQ Sunrise

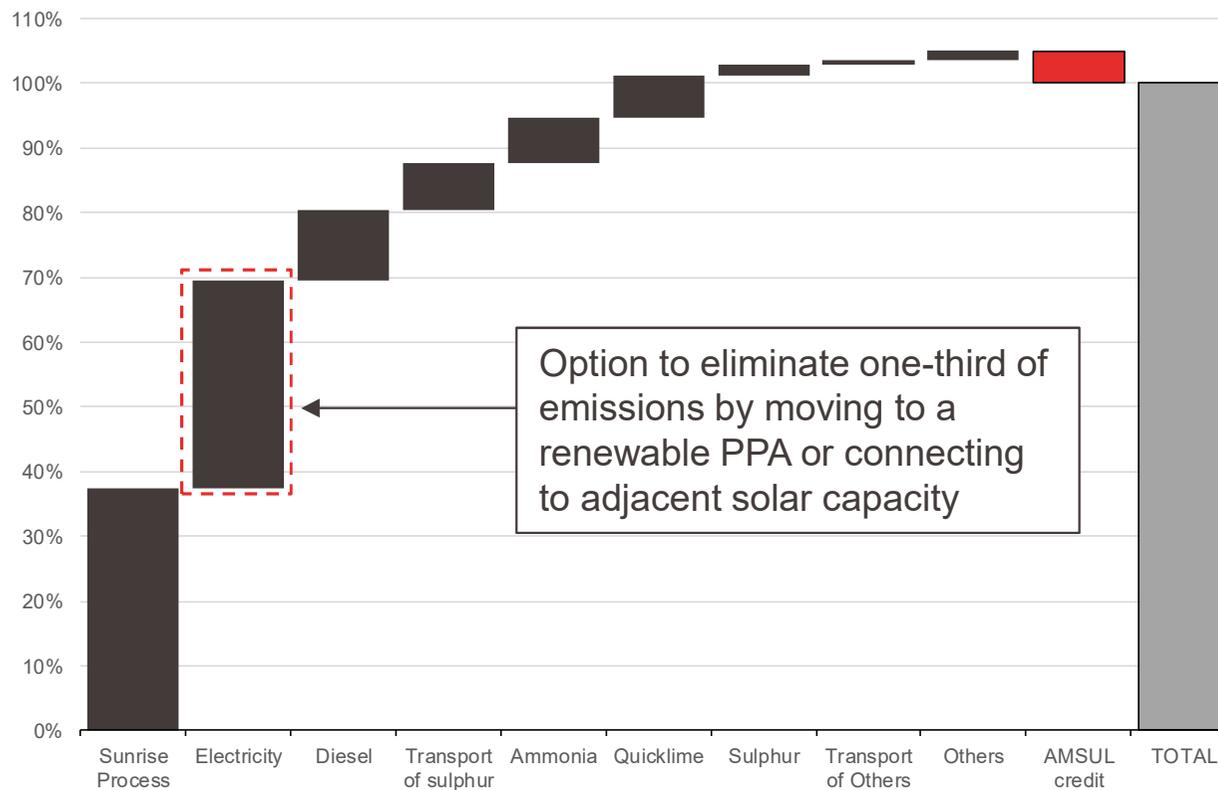
Understanding the Sunrise emission hot spots

| Indicator | Unit | Value | |
|---------------------------------------|---------------|---------|-----------------|
| Total Sunrise Project, cradle to gate | t CO2e/year | 571,457 | |
| - scope 1 emissions | t CO2e/year | 265,577 | |
| - scope 2 emissions | t CO2e/year | 165,844 | |
| - scope 3 emissions | t CO2e/year | 140,036 | |
| Nickel carbon intensity | kg CO2e/kg Ni | 17.2 | → 354kt CO2e pa |
| Cobalt carbon intensity | kg CO2e/kg Co | 45.4 | → 204kt CO2e pa |
| Scandium carbon intensity | kg CO2e/kg Sc | 2,107 | → 14kt CO2e pa |

Source: Energetics Report and internal company analysis. Assumes Australian grid energy mix in carbon calculation (scope 2).

Breakdown of CO2e releases for Sunrise

Integrating renewable power at Sunrise reduces carbon by circa 30%

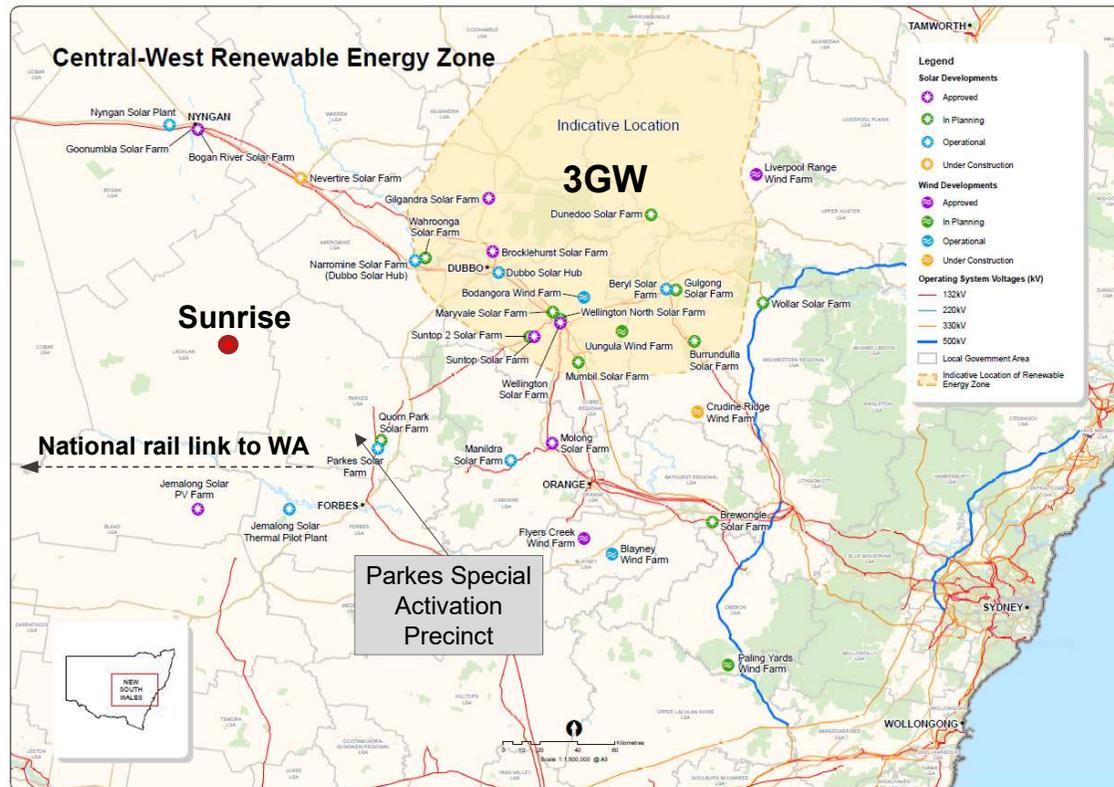


Source: Life Cycle Analysis by Energetics, February 2020.

| Indicator | Unit | Value |
|----------------------------------|-------------|-------|
| Sunrise (Imported Power) | | |
| Per kg Ni metal produced | kg CO2 e/kg | 17.2 |
| Per kg Co metal produced | kg CO2 e/kg | 45.4 |
| Per kg Sc metal produced | kg CO2 e/kg | 2,107 |
| Sunrise (Renewable Power) | | |
| Per kg Ni metal produced | kg CO2 e/kg | 10.8 |
| Per kg Co metal produced | kg CO2 e/kg | 28.4 |
| Per kg Sc metal produced | kg CO2 e/kg | 1,318 |

The vision for Sunrise and Central NSW

Integrated precursor / cathode production, renewable generation and recycling



Renewable Power: The Central-West Renewable Energy Zone (REZ) will add 3GW of new solar generation capacity to Sunrise’s doorstep

Linking Li – Ni - Co: The east-west national rail corridor connects at Parkes, linking Sunrise to the world’s largest sources of lithium production

Active material production: significant cost savings can be generated by co-locating Ni/Co sulfate and precursor/cathode production

Closed recycling loop: Surplus autoclave and refining capacity allows cost-effective recycling of used cathode to recover metals (Parkes Special Activation Precinct is a dedicated industrial zone incorporating recycling/re-use facilities powered by waste-to-energy).

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