



Providing a Closed-Loop Solution for Battery Recycling

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Agenda

1. Battery Recycling Market Landscape

2. Corporate Profile

3. Technology

4. Spoke & Hub Deployment

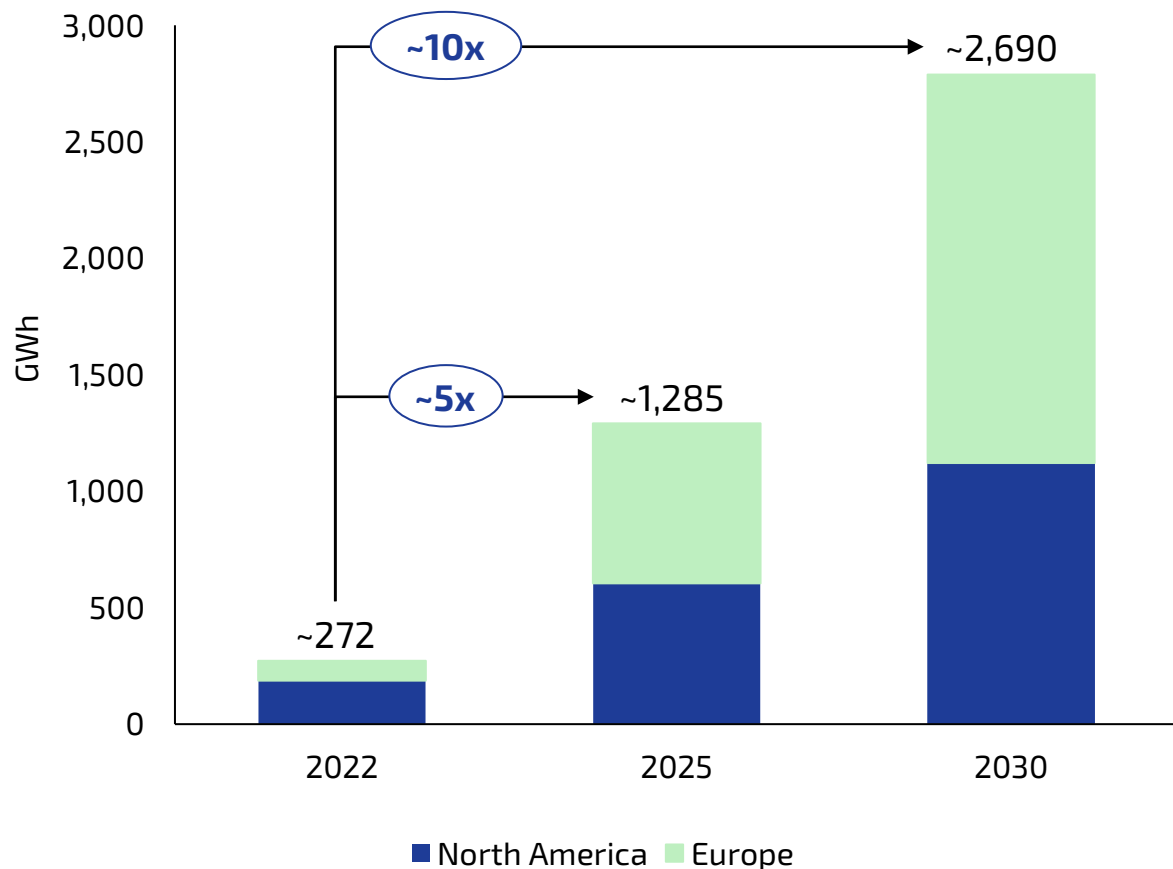
5. EMEA Summary

6. ESG

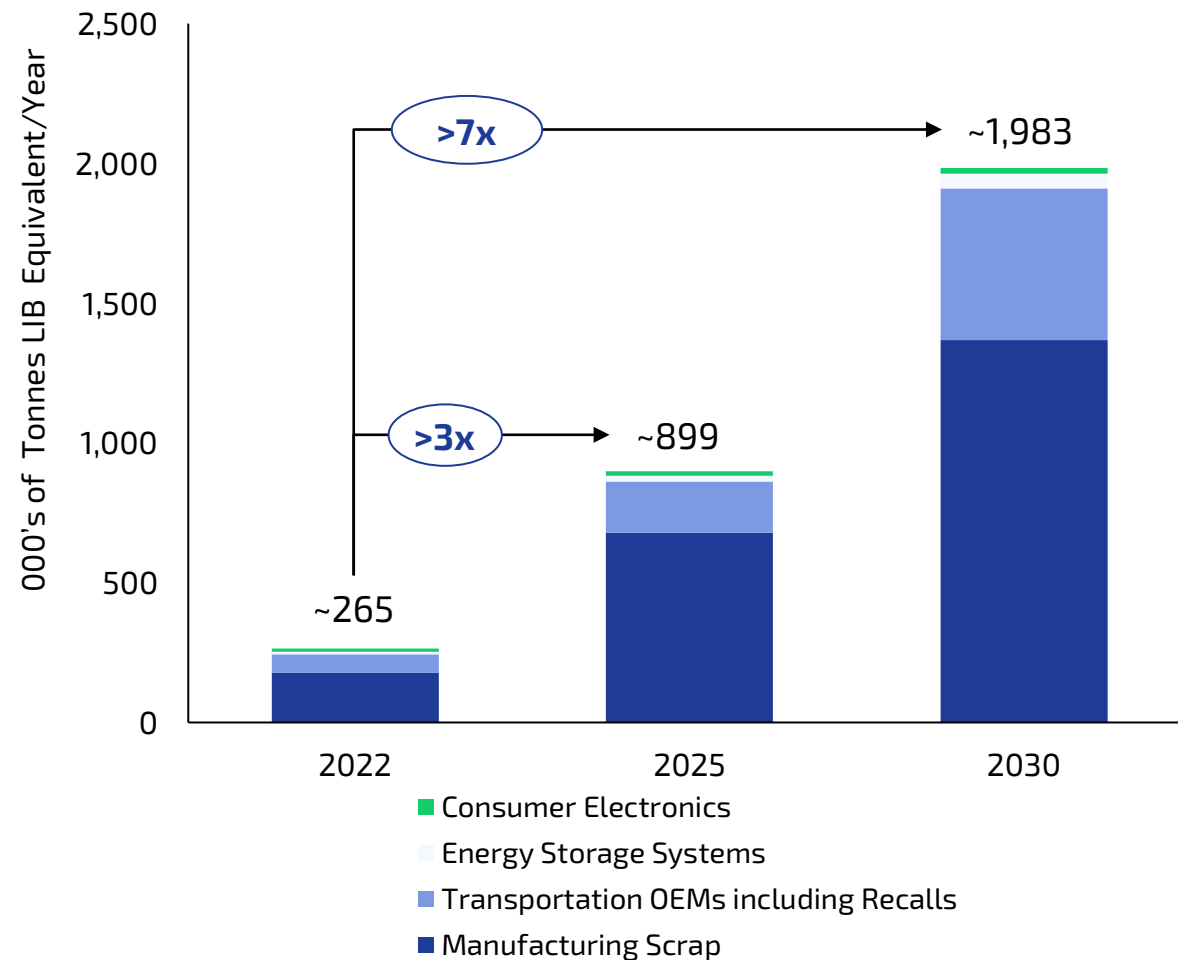
North America/EU Market Demand Landscape



North America and Europe Total Announced Megafactory Capacity⁽¹⁾



North America and Europe Battery Materials TAM⁽¹⁾



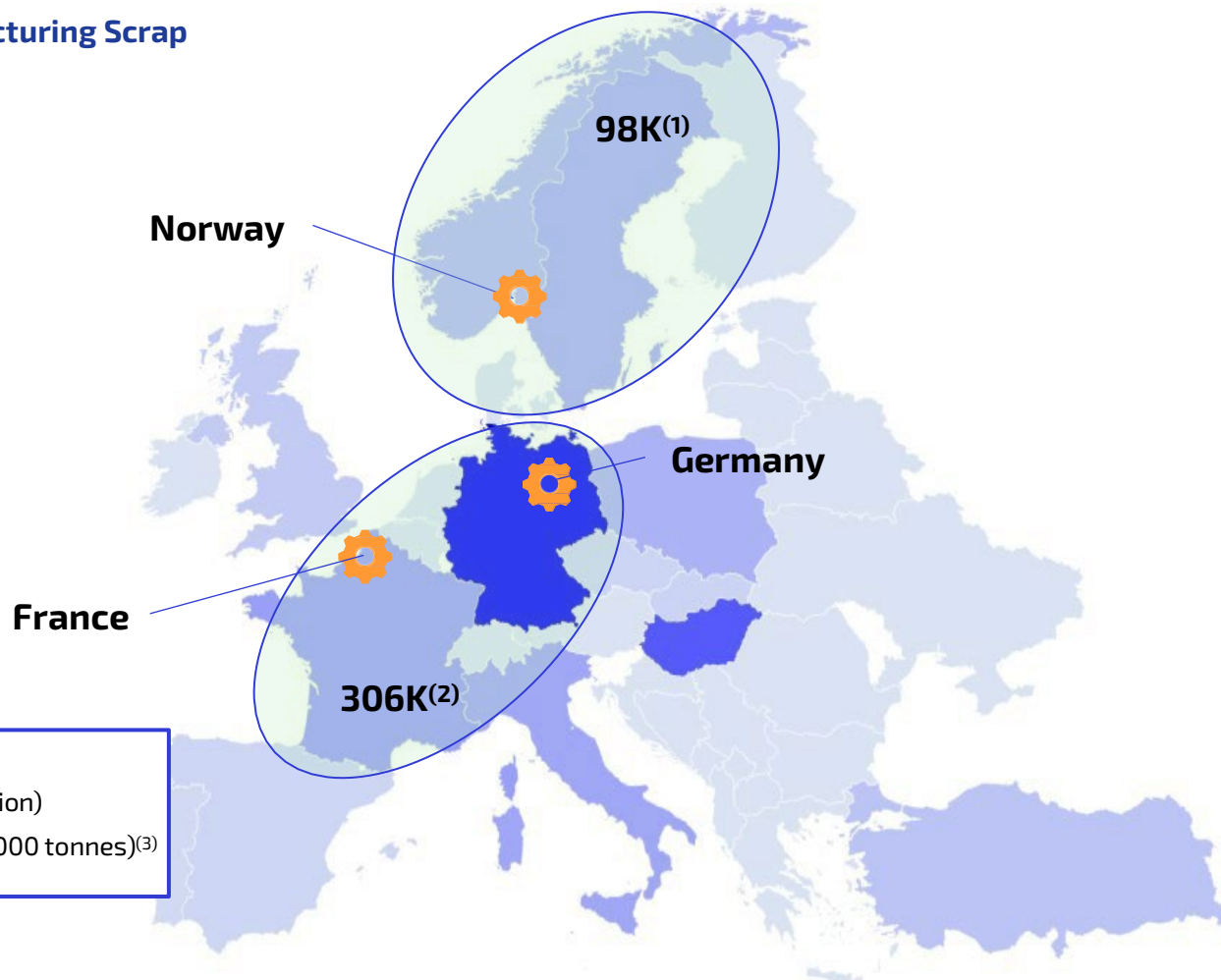
(1) Benchmark Mineral Intelligence (BMI), company sourced announcements and Li-Cycle estimates as of Sept 2022 for Megafactory capacity estimates. TAM refers to Total Addressable Market, with estimates as of March 2023.

Europe Battery Materials Market: Accelerating Growth Rates



2030 LIB Manufacturing Scrap
(in '000 tonnes)

Low High

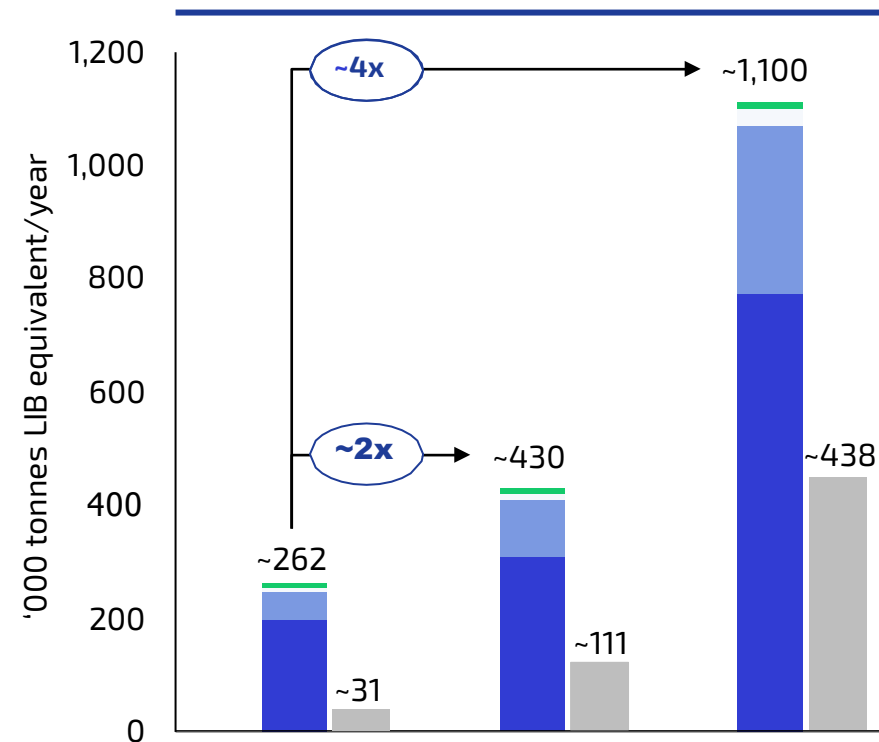


Legend

- Spoke (in construction)
- Demand centers ('000 tonnes)⁽³⁾

(1) Includes Norway and Sweden
 (2) Includes Germany and France
 (3) BMI, Li-Cycle estimates and publicly announced nameplate capacities (as of December 2022)
 (4) Company announcements and Li-Cycle estimates for post processing recycling capacity

Total Europe
Battery Materials TAM



■ Consumer Electronics
■ Energy Storage Systems
■ Transportation OEMs including Recalls
■ Manufacturing Scrap
■ Forecast Total Post-Processing Recycling Capacity⁽⁴⁾

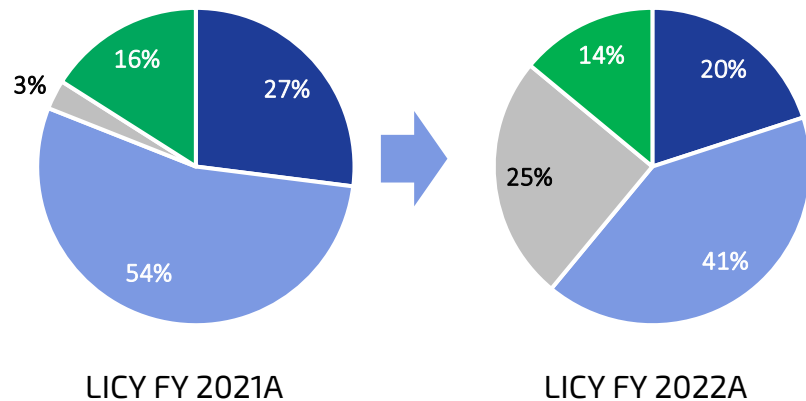
Expanding Spoke Network Drives Portfolio Growth and Diversifies Feedstock Sources



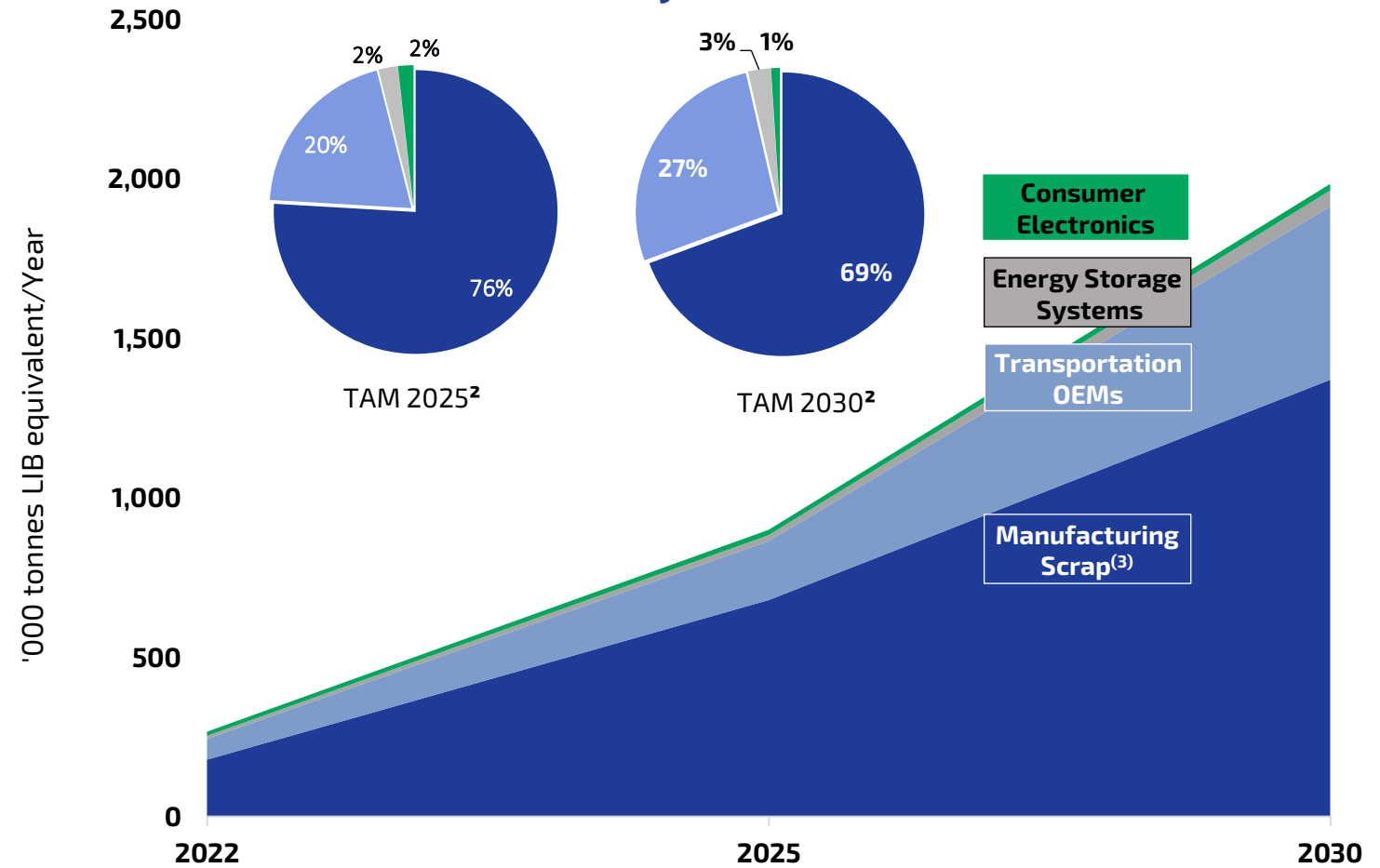
Diverse Customer Sources

- Battery Manufacturers
- EV OEMs & Service Providers to EV OEMs
- Energy Storage System Owners
- Consumer Electronics Recyclers

LICY Battery Materials Mix⁽¹⁾



NA and EU Battery Materials TAM⁽²⁾



■ Manufacturing Scrap

■ Transportation OEMs, including Recalls

■ Energy Storage Systems

■ Consumer Electronics

(1) Measured by weight of input battery materials

(2) BMI and Li-Cycle estimates for Total Addressable Market (TAM) forecast (as of March 2023). Axis labels based on a conversion ratio of 90,000 tonnes LIB equivalent/year to 35,000 tonnes Black Mass

(3) Manufacturing scrap demand derived from BMI and Li-Cycle estimates



Key Facts

2016 Founded by Tim Johnston and Ajay Kochhar

2021 Publicly listed in August (NYSE: LICY)

~ **\$580M** Cash on Hand¹

~ **400+** Employees Globally

\$375M Conditional commitment loan from U.S. Department of Energy

Strategic Objectives



Health and Safety

Zero harm goal: Taking care of our employees, contractors and the community is our license to operate.



Environmentally Sustainable

Core to our culture: Our technology, operations and people support a global decarbonization and greener future.



Profitable Growth

Accretive returns: Capture growth at value for our shareowners.

Spoke & Hub Technologies™



1

Spokes recycle batteries & scrap into black mass



2

Rochester Hub to process into battery-grade lithium, nickel, and cobalt



Spoke & Hub Capacities

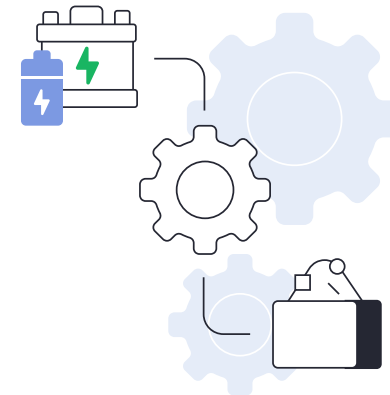
Spoke current processing capacity:

51,000 tonnes of lithium-ion battery material/year

Expected to increase by year-end 2023 to: **81,000 tonnes** of lithium-ion battery material/year

Rochester Hub expected processing capacity:

35,000 tonnes of black mass/year, equivalent to 90,000 tonnes of battery material



(1) \$578 million cash on hand at October 31, 2022

(2) Spokes expected to have total (existing and future planned) LIB processing capacity of 96,000 tonnes/year; Rochester Hub expected to have 35,000 tonnes of black mass processing capacity/year or 90,000 tonnes LIB equivalent/year or 18 GWh and commence commissioning in late calendar 2023



VISION

Leading the global supply of recycled critical materials for a clean energy future.



MISSION

Recycle critical materials to create a sustainable closed-loop battery supply chain.



VALUES

Safety

Safety is non-negotiable and our top priority.

Sustainability

Sustainability is at the core of our business. We are committed to advancing our clean technologies.

Integrity

We operate honestly, embrace diversity, and respect our employees and stakeholders.

Agility

We drive innovation and effectively respond to opportunities and challenges to deliver winning results.



Closed Loop Solution

Li-Cycle's innovative Spoke & Hub Technologies™ help build a **safe and sustainable battery supply chain** without any significant modification needed by the industry



Spoke & Hub Technology™

Li-Cycle's 2-step process **with 95% recovery rate** from lithium-ion batteries of all chemistries and form factors. In addition, Arizona and Alabama Spokes have the **capability to shred full battery packs without disassembly**.

Li-Cycle uses the **modular design for its Spokes** which enables rapid capacity growth to meet market demand.



Environmentally Sustainable

Environmentally-friendly alternative with **smaller environmental footprint** than thermal processes and up to **67% less CO₂ emissions than mining and refining**.



Global Reach

Li-Cycle is currently **executing on its plans to expand into Europe, with continued strong commercial connectivity to Asia (with opportunistic expansion in Asia, where applicable)**.



Customer-Centric Service Model

Li-Cycle's Spoke & Hub network ensures our processing facilities are **strategically located in close-proximity to our customers**. End-to-end services customized to meet our customers' unique needs.

Canadian Prime Minister Justin Trudeau and European Commission President Ursula von der Leyen visit Li-Cycle



- On March 7, 2023, Li-Cycle hosted the Prime Minister of Canada, Justin Trudeau, and the President of the European Commission, Ursula von der Leyen, at our Ontario Spoke, and met our co-founders and employees.
- The leaders discussed the importance of Li-Cycle's innovative, proprietary, and sustainable Spoke & Hub Technologies™, and our expansion plans in Canada and Europe



Justin Trudeau ✓
@JustinTrudeau

Officiel du gouvernement - Canada

Stopped in at @Li_Cycle with @vonderLeyen. They're recycling lithium-ion batteries for clean tech like electric vehicles, creating jobs, and building up Canada's critical minerals supply chain – and they're opening plants in Europe, too, so they can do the same thing there.



Ursula von der Leyen ✓
@vonderleyen

EU official

Inspiring visit of @li_cycle, where lithium batteries are recycled.

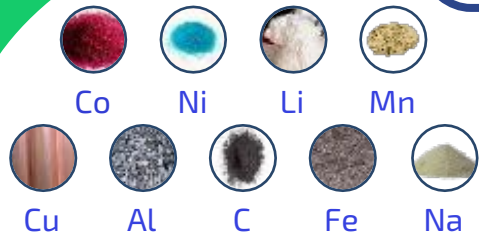
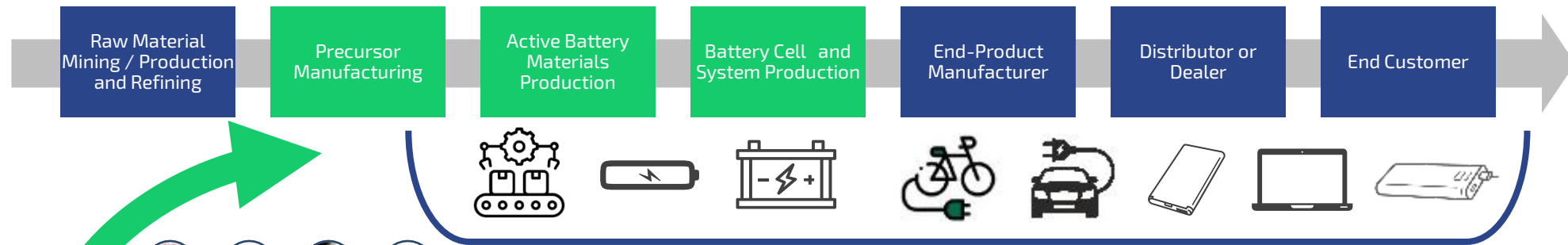
Recycling will be a key pillar of our Critical Raw Materials (CRM) Act.

And our CRM Partnership with Canada will strengthen our strategic value chains and help us reach our climate objectives.



Technology

LI-CYCLE'S SPOKE & HUB TECHNOLOGY



Centralized Hub
Hydrometallurgical



Black Mass



Regional Spokes
Mechanical



Shredded Cu/Al



Mixed Plastics

Sold into the market

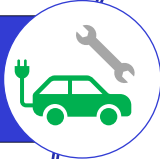




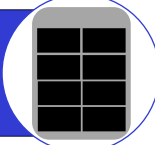
End-of-Life Batteries



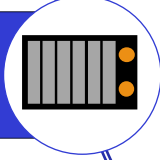
Recalled Batteries



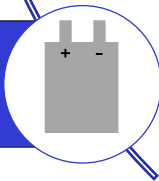
Battery Packs



Battery Modules



Cells



Li-Cycle Powder-to-Pack Solution

Cathode Powder



Cathode/Anode Foils



Pressing Scrap



Electrode Cut-offs



Cell Assemblies
(stacking/folding/winding)



Electrolyte Filling and Formation
Rejects



Full Pack Shredding Capabilities – Key Differentiator



- Li-Cycle's "Generation 3" Spokes can process full EV and energy storage battery packs without any manual dismantling and discharging
- "Generation 3" Spokes include
 - Arizona Spoke
 - Alabama Spoke
 - Germany Spoke
 - Norway Spoke
 - France Spoke
- Several advantages
 - Enhanced safety and increased cost-effectiveness
 - Witness destruction of R&D prototype packs
 - Cell-To-Pack shredding (pack is effectively a large module)
- Maintain the option to either dismantle packs into modules or shred entire packs





SPOKE & HUB

Spoke & Hub Network



North American Spokes

Ontario Spoke

- Kingston, ON, Canada
- **5,000 tonnes/year processing capacity**
- Li-Cycle's first Spoke, and successful Hub pilot project
- Operational since Q3 2020
- Initial site work for new and larger Ontario Spoke in Kingston expected to start in 2023

New York Spoke

- Rochester, NY, USA
- 5,000 tonnes/year main line processing capacity
- 13,000 tonnes input/year ancillary processing capacity
- **18,000 tonnes input/year total processing capacity**
- Operational since Q1 2021

Arizona Spoke

- Gilbert, AZ, USA
- **18,000 tonnes/year processing capacity (main line and ancillary)**
- Utilizes proprietary full EV pack processing technology
- Operational since Q2 2022

Alabama Spoke

- Tuscaloosa, AL, USA
- **10,000 tonnes/year processing capacity**
- Utilizes proprietary full EV pack processing technology
- Operational since Q4 2022

European Spokes

Germany Spoke

- Near Magdeburg, Germany
- **30,000 tonnes/year processing capacity (main line and ancillary)**
- Two main lines to meet growing customer demand
- Utilizes proprietary full EV pack processing technology
- Expected to be operational in 2H 2023

France Spoke

- Harnes, France
- **10,000 tonnes/year initial processing capacity**
- Utilizes proprietary full EV pack processing technology
- Currently in development, targeted to be operational in 2024

Norway Spoke

- Moss, Norway
- **10,000 tonnes/year processing capacity**
- Currently in development, initially as a consolidation facility, and then to an operational Spoke in 2024

Rochester Hub

- Rochester, NY, USA
- Expected to be first-of-its-kind commercial hydrometallurgical battery resource recovery facility in North America
- **35,000 tonnes processing capacity of black mass/year**
- Commissioning expected to start in late 2023



Flagship Hub Facility in Rochester, NY



Key Highlights

- The Rochester Hub is expected to be the **first-of-its-kind commercial hydrometallurgical battery resource recovery facility** in North America
- Expected production capacity of battery-grade materials to be recovered and reintroduced into the supply chain:
 - **Lithium Carbonate: 7,500-8,500 tonnes/year**
 - **Nickel Sulphate: 42,000-48,000 tonnes/year**
 - **Cobalt Sulphate: 6,500-7,500 tonnes/year**
- **Processing capacity of up to 35,000 tonnes of black mass/year equivalent to approximately 90,000 tonnes of lithium-ion batteries of 18 gigawatt hours**
- **\$375M** conditional commitment loan from U.S. Department of Energy
- Expected to begin commissioning in late 2023





EMEA Summary

EMEA Commercial Leadership Team



Elewout Depicker
VP, Commercial & Corporate Development



Manfred Schmidt
VP, Commercial - Battery Supply



Tom Wadsworth
Commercial Director - Battery Supply



Jonas Jeschke
Commercial Manager – DACH Region



Joacim Adlerborn
Commercial Manager – Scandinavia



Alessandro Tripoli
Commercial Manager – France





Li-Cycle Europe Spoke Network



EU Projected Spoke Capacity

- German Spoke to add **30,000 LIB t/a** capacity by end of **2023**
- Norway, France, other Spokes under development expected to add **50,000 LIB t/a**
- Total pre-processing capacity **80,000 LIB t/a** by **2025**



EMEA Assets	SOP	Status	Capacity (2025)
 Germany Spoke	2023	Under construction	30,000 t/a LIB
 Norway Spoke	2024	Under construction	10,000 t/a LIB
 France Spoke	2024	Site permit pending	25,000 t/a LIB
 Other EU Spoke(s)	TBC	N/A	TBC

New KION Partnership



KION
GROUP

One of the world's leading providers of industrial trucks, such as forklift trucks and warehouse trucks

- Li-Cycle named preferred global supplier
- Li-Cycle to recycle lithium-ion batteries for KION's global brands
- Commercial contract through 2030
- Recycling begins primarily at the Germany Spoke, expanding to France and other sites



*"With this strategic partnership, we are taking an important **step towards the circular economy** that we want to implement for our products,"*

Henry Puhl, Chief Technology Officer of KION



ESG

Li-Cycle's Global Strategy



Circular Economy: Recovering strategic and critical materials from lithium-ion batteries in a safe, environmentally friendly and economically sustainable manner



Critical Source: Developing 'urban mining,' a sustainable alternative to current global mining practices, serving as a secondary source solution, based on patented Spoke & Hub Technologies™



Premier Partner: Offering go-to solutions to address manufacturing scrap and end-of-life recycling needs for battery and vehicle OEMs



Strategic Locations: Deploying an integrated network at regionally optimized locations that reduces costs and safety risks



Sustainable Technology: Diverting lithium-ion battery materials from landfill sites and employing non-emitting hydrometallurgical solutions versus traditional pyro processing methods



Strategic Growth: Focusing near-to mid-term assets in North America and Europe; growing through commercial partnerships with leading global customers

Significantly Improved Emissions Profile Compared to Mining



Compared with traditional mining and refining, **Li-Cycle's Spoke & Hub Technologies™** can (per tonne of battery input):

Reduce CO2 emissions by up to

40 – 67%

~38k - 117k tonnes of CO2

Reduce NOX emissions by up to

86 – 89%

~353k - 495k tonnes of NO2

Reduce SOX emissions by up to

80 – 86%

~ 226k - 330k tonnes of SO2

Reduce water usage by up to

97%

~ 2 million cubic metres of water

(1) Based on independent Life Cycle Assessments (LCA) completed on behalf of Li-Cycle. Environmental benefits are shown as emission offsets comparison for 1 tonne of Battery Input. Mining & Refining baseline calculated by a third party, including external sources (GREET, Argonne National Laboratory).

(2) Li-Cycle's LifeCycle Assessment Results are fully loaded, i.e., inclusive of indirect costs not directly associated with the Spoke & Hub process, including transportation of material.

(3) Li-Cycle's process offsets 40-67% of the CO2 Profile of an EV Battery. The battery pack typically accounts for over ~40-50% of an electric vehicle's total CO2 emissions profile (Source: Volkswagen AG).

EU Battery REGULATION



Key Targets (by end of year>>)	2023	2024	2025	2026	2027	2028	2029	2030	2031		2035
1) Recycling Efficiency <i>Obligation on the first recycler to report to relevant national authorities</i>	50%	-	75% lead-acid 65% Li	-	-	-	-	80% lead-acid 70% li-based			-
2) Recovery Rate of Metals <i>Obligation on the first recycler to report to relevant national authorities</i>	N/A	-	-	-	Li 50% Ni, Co, Cu - 90%	-	-		Li 80% Co, Ni, Cu - 95%		-
3) Recycled Content in batteries <i>Cut-off dates calculated assuming Battery Regulation enters into force by Mat 2023</i>	N/A	-	-	-	-	Info on recycled content	-	Li 6% Ni 6% Co 16% Pb 85%			Li 12% Ni 15% Co 26% Pb 85%
4) Carbon Footprint <i>Cut-off dates calculated assuming Battery Regulation enters into force by Mat 2023</i>	-	-	Declaration for EV batteries	-	Max threshold for EVs	-	-	-	-		-
5) Collection Targets	45% of portable batteries	-	-	-	63% of portable batteries	51% of LMT	-	73% of portable batteries	61% of LMT		-



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