LI-CYCLE UPSIZED HUB AND STRATEGIC COLLABORATION WITH LG

Investor Presentation

December 14, 2021

Li-Cycle®

Disclaimer

FORWARD LOOKING STATEMENTS

- Certain statements contained in this presentation may be considered “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, Section 27A of the U.S. Securities Act of 1993, as amended, Section 21 of the U.S. Securities Exchange Act of 1934, as amended, and applicable Canadian securities laws. Forward-looking statements may generally be identified by the use of words such as “may”, “will”, “plan”, “potential”, “future”, “target” or other similar expressions that predict or indicate future events or trends or that are not statements of historical matters, although not all forward-looking statements contain such identifying words. Forward-looking statements may include, for example, statements about the development of the Hub including the related capital investment and anticipated timing for construction and commissioning, the output capacity of the Hub, the future financial performance of Li-Cycle and performance vis-à-vis its competitors, and the anticipated benefits from the proposed collaboration with LG and the future financial performance of Li-Cycle. These statements are based on various assumptions, whether or not identified in this communication, which Li-Cycle believe are reasonable in the circumstances. There can be no assurance that such estimates or assumptions will prove to be correct and, as a result, actual results or events may differ materially from expectations expressed in or implied by the forward-looking statements.
- Forward-looking statements involve inherent risks and uncertainties, most of which are difficult to predict and many of which are beyond the control of Li-Cycle and are not guarantees of future performance. Li-Cycle believes that these risks and uncertainties include, but are not limited to, the following: Li-Cycle’s Hub, Arizona Spoke, Alabama Spoke and other future projects are subject to development risks, including with respect to engineering, permitting, procurement, construction, materials and labor costs, commissioning and ramp-up; Li-Cycle’s inability to develop the Hub in a timely manner or on budget, which would be expected to result in a significantly greater estimated capital investment than that set forth in the definitive feasibility study; the Hub not meeting expectations with respect to its productivity or the specifications of its end products; market developments (such as increasing EV battery manufacturing volumes in North America and trends around battery chemistries in EV applications); Li-Cycle’s failure to materially increase recycling capacity and efficiency; Li-Cycle’s inability to economically and efficiently source, recover and recycle lithium-ion batteries and lithium-ion battery manufacturing scrap, as well as third party black mass, and to meet the market demand for an environmentally sound, closed-loop solution for manufacturing waste and end-of-life lithium-ion batteries; Li-Cycle’s inability to successfully implement its global growth strategy, on a timely basis or at all; Li-Cycle’s inability to manage future global growth effectively; Li-Cycle may engage in strategic transactions, including acquisitions, that could disrupt its business, cause dilution to its shareholders, reduce its financial resources, result in incurrence of debt, or prove not to be successful; one or more of Li-Cycle’s current or future facilities becoming inoperative, capacity constrained or if its operations are disrupted; additional funds required to meet Li-Cycle’s capital requirements in the future not being available to Li-Cycle on commercially reasonable terms or at all when it needs them; Li-Cycle expects to incur significant expenses and may not achieve or sustain profitability; problems with the handling of lithium-ion battery cells that result in less usage of lithium-ion batteries or affect Li-Cycle’s operations; Li-Cycle’s inability to maintain and increase feedstock supply commitments as well as securing new customers and off-take agreements; a decline in the adoption rate of EVs, or a decline in the support by governments for “green” energy technologies; decreases in benchmark prices for the metals contained in Li-Cycle’s products; changes in the volume or composition of feedstock materials processed at Li-Cycle’s facilities; the development of an alternative chemical make-up of lithium-ion batteries or battery alternatives; Li-Cycle’s revenues for the Hub are expected to be derived significantly from a single customer; Li-Cycle’s insurance may not cover all liabilities and damages it incurs in the operation of its business; Li-Cycle’s heavy reliance on the experience and expertise of its management; Li-Cycle’s reliance on third-party consultants for its regulatory compliance; Li-Cycle’s inability to complete its recycling and recovery processes as quickly as customers may require; Li-Cycle’s inability to compete successfully; increases in income tax rates, changes in income tax laws or disagreements with tax authorities; significant variance in Li-Cycle’s operating and financial results from period to period due to fluctuations in its operating costs and other factors; fluctuations in foreign currency exchange rates which could result in declines in reported sales and net earnings; unfavorable economic conditions, such as consequences of the global COVID-19 pandemic; natural disasters, unusually adverse weather, epidemic or pandemic outbreaks, boycotts and geo-political events; failure to protect Li-Cycle’s intellectual property; Li-Cycle may be subject to intellectual property rights claims by third parties; Li-Cycle’s failure to effectively remediate the material weaknesses in its internal control over financial reporting that it has identified or if it fails to develop and maintain a proper and effective internal control over financial reporting. These and other risks and uncertainties related to Li-Cycle’s business are described in greater detail in the section entitled "Risk Factors" in its final prospectus dated August 10, 2021 filed with the Ontario Securities Commission in Canada and the Form 20-F filed with the U.S. Securities and Exchange Commission. Because of these risks, uncertainties and assumptions, readers should not place undue reliance on these forward-looking statements. Actual results could differ materially from those contained in any forward-looking statement.
- In addition, forward-looking statements contained in this presentation reflect Li-Cycle’s assessments, expectations, assumptions, plans or forecasts of future events and views as of the date of this presentation. Li-Cycle anticipates that subsequent events and developments could cause Li-Cycle’s assessments, expectations, assumptions, plans and forecasts to change. While Li-Cycle may elect to update these forward-looking statements at some point in the future, Li-Cycle has no intention and undertakes no obligation to do so, except as required by applicable laws. These forward-looking statements should not be relied upon as representing Li-Cycle’s assessments as of any date subsequent to the date of this presentation. Li-Cycle’s forward-looking statements are expressly qualified in their entirety by this cautionary statement.

Key Strategic Updates

- **Letter of Intent for multi-year strategic partnership**
  - $50MM equity investment from LG Energy Solutions (LGES) and LG Chem (LGC), upon completion of commercial agreements(1)
  - Closed loop commercial relationship – battery supply through to offtake
  - Builds on existing battery supply relationship

- **Pulling forward investments in North America** to serve growing pipeline of battery megafactories

- **Upsizing Hub capacity to 35,000 t/y black mass** to meet growing commercial customer demand, including LG, Ultium, and others
  - Planned Capital investment: ~$485 million(2)

(1) Investment by LGES and LGC subject to completion of manufacturing scrap supply and nickel sulphate off-take agreement by March 13, 2022. See Li-Cycle's Press Release dated December 14, 2021 for additional details.
(2) +/- 15% estimate, per the Definitive Feasibility Study completed in December 2021.

LG and Li-Cycle Announce Framework for Multi-Year Strategic Collaboration

$50MM Equity Investment, "Closed Loop" Battery Supply and Offtake Partnership

- LGES is **one of the largest** EV battery manufacturers globally
- LGES aims to secure a total production capacity of **~150 GWh by 2025 in the U.S.**
- LGES and LGC have agreed on a **$50 million**(1) investment in Li-Cycle common shares, closing upon completion of commercial agreements by March 13, 2022
- LGES and Li-Cycle intend to cooperate on **recycling nickel-bearing lithium-ion battery scrap** and certain other lithium-ion battery materials to create a **closed loop ecosystem**
- Li-Cycle to **recycle the battery materials** from LGES and **supply 20,000 tonnes of nickel**(2) **over 10 years** beginning in 2023 to LGC and LGES

Li-Cycle® LG Energy Solution LG Chem

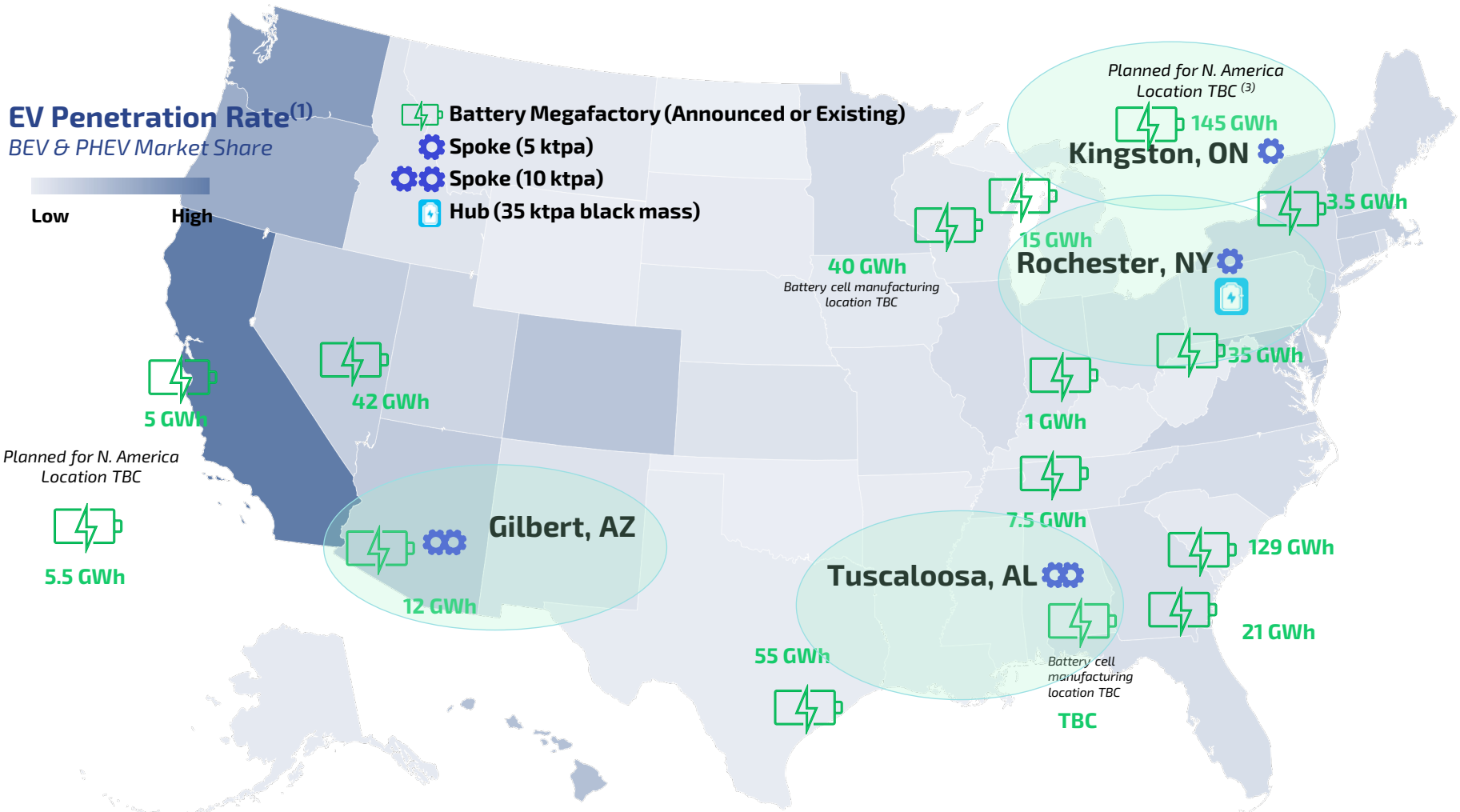
Source: LGES announcements and information.

(1) $50 million equity investment in Li-Cycle at a price of $11.32 per common share, upon completion of the commercial agreements by March 13, 2022. Investment by LGES and LGC subject to completion of manufacturing scrap supply and nickel sulphate off-take agreement. See Li-Cycle's Press Release dated December 14, 2021 for additional details.

(2) Equivalent to ~90,000 tonnes of nickel sulphate over 10 years.

Network of Spokes and Centralized Hub Clustered with Demand Centers

Existing North American Megafactory Capacity Projected to Grow from 45 GWh (2021) to **>500 GWh** (2025)



Manufacturing Scrap Demand Far in Excess of Li-Cycle's Base Case NA Capacity

2025 NA GWh Estimate	**>500** GWh
2025 NA Scrap Estimate	**>250,000**(2) tonnes LIB / y
LICY 2025 Base Case Spoke Capacity	**30,000** tonnes LIB / y
Addressable Delta in Scrap Demand Alone	**~220,000** tonnes LIB / y

Sources: EVAdoption.com, company sourced announcements and Li-Cycle estimates.

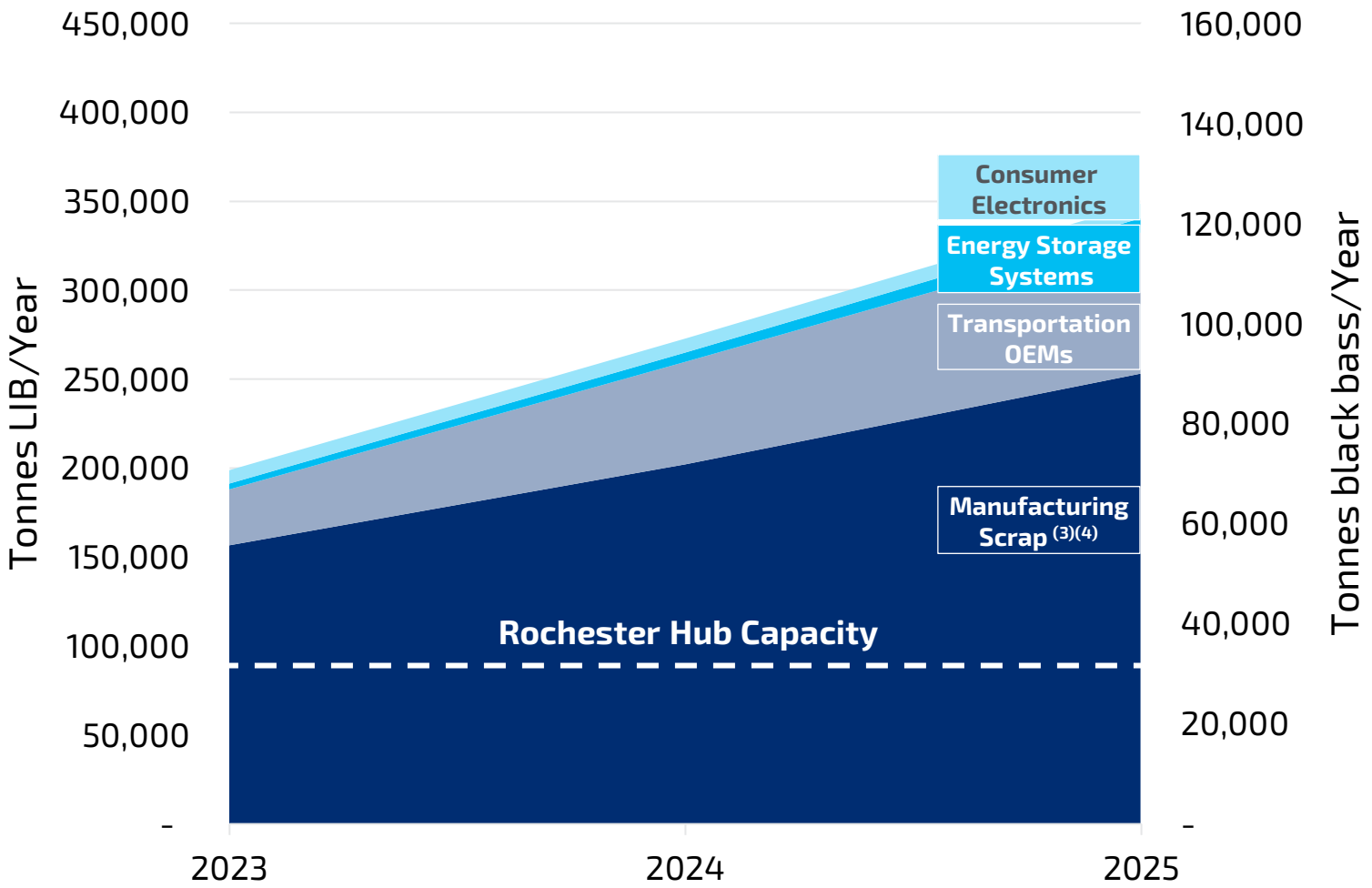
(1) Adoption rate data from EVAdoption.com

(2) For manufacturing scrap demand estimate, assumes a conversion rate of 5,000 t/y LIB equivalent to 1 GWh and a scrap rate of 10%; assuming a range of 5% - 10% recycling scrap would yield 125,000 – 250,000 tonnes per year LIB equivalent of material.

(3) Includes LG indication of additional planned capacity by 2025 – per theguru.co.kr.

Battery Recycling Demand Far Exceeds Capacity in North America; Well-Positioned to Capitalize Through First Mover Advantage

North America Total Addressable Market[1]



Select Li-Cycle Battery Supply Customers

After-Sales[2]

HELBIZ
call2recycle Leading the charge for recycling
ARRIVAL
RENEWANCE STEWARDSHIP OPERATIONALIZED
NEW FLYER
UnivarSolutions

Manufacturing Scrap

LG
ULTIUM

Numerous other vehicle and battery OEMs

Sources: Benchmark Mineral Intelligence ("BMI") and Li-Cycle estimates.
(1) BMI and Li-Cycle estimates as of Dec. 2021 Total Addressable Market (TAM) forecast .
(2) After-Sales includes Transport OEMS, ESS, Consumer Electronics and Other, largely accounting for end-of-life batteries including recalls.
(3) Manufacturing scrap demand estimate derived from BMI and Li-Cycle's Dec. 2021 Total Addressable Market (TAM) Forecast.
(4) Includes LG indication of additional planned capacity by 2025 – per theguru.co.kr.

Li-Cycle Meets Evolving Customer Battery Recycling Needs

Li-Cycle Battery Recycling Sources[1]

Manufacturing Scrap

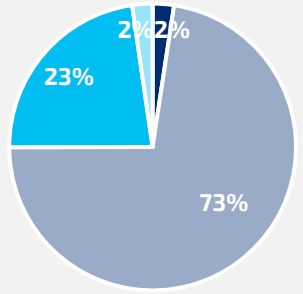
After-Sales Sources

- Consumer Electronics
- Transportation OEMs, including Recalls
- Energy Storage Systems

Estimated as of FY2020

Estimated as of FY2021

TAM Estimate[2]



North America TAM Forecast 2025

Recycling Source Equivalency

GWh Equivalency[3]

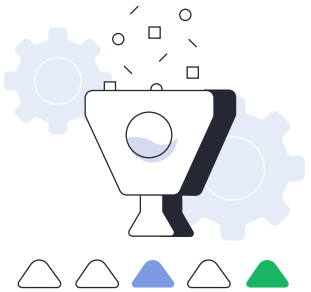
~18
GWh

Electric Vehicle Equivalency[4]

~225,000
Electric Vehicles

Li-Cycle's Hub

90,000 t LIB Equivalent Input/y



Production Equivalency

Black Mass Input Capacity[5]

35,000 t/y
Black Mass

Upsized Hub Output Capacity of Critical Battery Materials[6]

42,000 - 48,000 t/y
Nickel Sulphate

6,500 – 7,500 t/y
Cobalt Sulphate

7,500 – 8,500 t/y
Lithium Carbonate

(1) Unaudited estimates based on Li-Cycle's internal inventory management system on a volumes basis.
(2) Sources: Benchmark Mineral Intelligence ("BMI"), Li-Cycle estimates. Li-Cycle's Dec. 2021 Total Addressable Market (TAM) Forecast on a volumes basis.
(3) Assumes a conversion rate of 1 GWh to 5,000 t/y LIB equivalent.
(4) Midpoint of range (180,000 – 270,000 Electric Vehicles). Assumes an average xEV battery weight of approximately 0.33-0.5 tonnes/vehicle.
(5) Estimated LIB to black mass equivalency, which can vary on the cathode and anode proportion in the material processed.
(6) Updated production range based on DFS estimates. Based on the December 2021 DFS, relative to June 2020 PFS estimates of 18,000-20,000 t/y of Nickel Sulphate, 10,000 – 12,000 t/y of Cobalt Sulphate, and 4,000-6,000 t/y of Lithium Carbonate.

Upsizing Hub to Optimize Commercial, Economic and Regulatory Benefits

Footprint: 68-acre parcel of land, including a 330,000 sq ft. on-site warehouse

Project & Location	▪ North America Hub 1 ▪ Rochester, New York, USA
Process Technology	▪ IP Protected Hydrometallurgical (Non-Pyro)
Capacity	▪ **Input capacity upsized by 40%** to a nameplate capacity of 35,000 t/y of black mass (equivalent to 90,000 t/y LIB)
Investment	▪ Planned Capital Investment of $485 million +/- 15%, based on completion of the Definitive Feasibility Study
Project Returns	▪ Expected to deliver highly accretive returns, based on IRR, NPV, DCF (with higher capital investment)
Funding	▪ Fully funded by balance sheet cash

Financing Options including potential "green" financing	▪ Li-Cycle intends exploring various opportunities to optimize capital structure, including credit from government-related institutions, such as:
	  ▪ Export Development Canada (EDC) with which Li-Cycle has entered into a non-binding LOI
	  ▪ Advancing eligibility for various U.S. Federal and State level loan programs

Expanded Scope and Scale Optimizes Project Economics, Capital Intensity and Environmental Footprint

Definitive Feasibility Study (December 2021) Highlights[1]

- Key design changes and cost adjustments relative to the Pre-Feasibility Study (PFS)[1]:
  - Higher material costs due in part to supply chain impacts, COVID-19, inflation and other factors
  - Scope adjustments based on contracted volumes
    - Increased production[2] of nickel sulphate by ~250% and of lithium carbonate by ~160%; decreased production of cobalt sulphate by ~65%
    - Inclusion of best-in-class environmental practices
  - Increase in plant scale and equipment in response to commercial pipeline growth; upsizing project capacity to 35,000 tonnes from 25,000 tonnes of black mass input/year
- Obtained firm price competitive bids for 80% of equipment
- Early procurement to secure long-lead critical equipment and materials
- Accelerated engineering design to facilitate start of construction
- Process engineering design is frozen
- Potential for Li-Cycle to leverage relationship with Koch Engineered Solutions (KES)

Upsized Hub Capacity to Serve Accelerating Customer Demand and Revised Scope for Environmental and Product Enhancements

(1) Preliminary Feasibility Study (PFS) completed in June 2020; Definitive Feasibility Study (DFS) completed in December 2021.
(2) Production increase or decrease is based on the DFS production midpoint values divided by the PFS production midpoint values.

Experienced Team With Successful Track Record

Executive Leadership, Team Bench Strength and Shareholder Alignment

- Executive leadership team oversees the entire project and understands detailed performance drivers
  - + 45 years of combined project and engineering management in the metals industry
  - + Robust history leading multi-disciplinary engineering teams and delivering successful projects
- In house team of 15+ with expertise and capabilities covering all key engineering disciplines
  - + >300 years of combined experience in engineering, procurement, and construction management (EPCM) and will own/manage equipment, material, and services contracts, as well as Health, Safety, Environment and Quality (HSEQ)
  - + Deep bench and expert proprietary knowledge to be deployed for future Hub projects
- **Aligned with shareholders**
  - + Leadership meaningful equity ownership
  - + Significant portion of corporate annual short-term compensation tied to target budget and schedule through completion

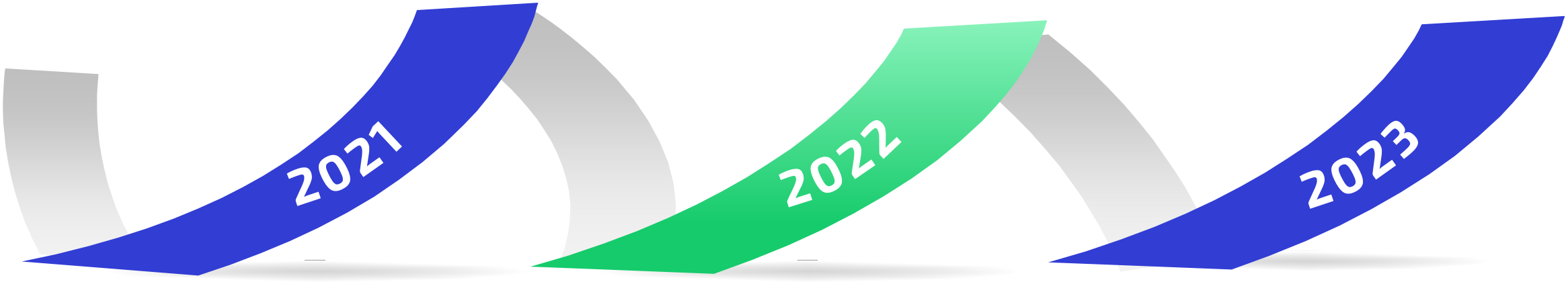
EPCM Provider – Hatch

- World-class hydrometallurgy and capital projects expertise in North America
- Providing detailed design, procurement management, expediting services, and overall project management
- Management of the General Contractor alongside Li-Cycle

General Contractor – Targeting Award in January 2022

- Soliciting bids from large construction companies with a track record of delivering similar projects with strong HSEQ performance
- Selected General Contractor will procure materials, provide general and specialized labor, equipment, and services

Key Milestones and Timeline for Upsized Hub Project Execution



- ☑ Completed Definitive Feasibility Study
- ☑ Key environmental permitting work streams completed or advanced
- ☑ Firm price competitive quotes on 80% of equipment
- ☑ Awarded EPCM contract to Hatch
- ☑ Mobilization to site

- ❑ Complete all permitting and major equipment procurement
- ❑ Advanced site construction underway
- ❑ Continued expansion of commercial contracting pipeline

- ❑ Mechanical completion
- ❑ Commissioning
- ❑ Begin ramp-up to nameplate capacity

Li-Cycle Expects the Hub to Position it as the #1 or #2 U.S.-Based Domestic Supplier of Battery Grade Advanced Materials[(1)]

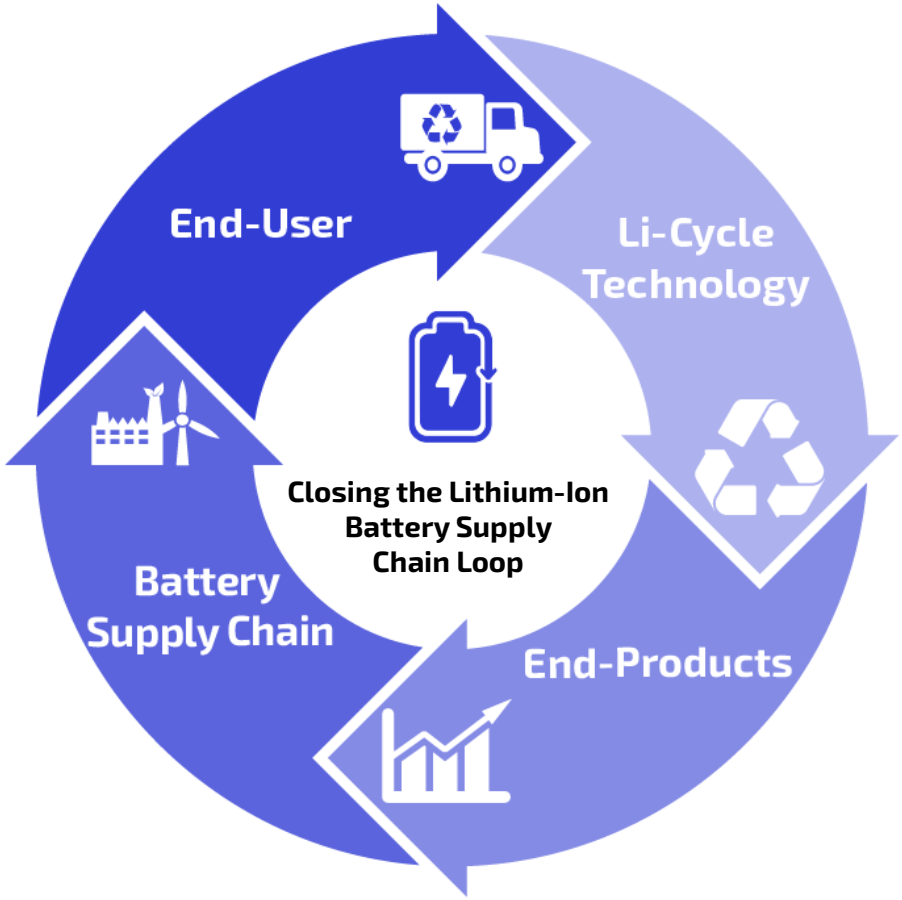
- Battery materials manufacturers are **accelerating production capacity in North America**, resulting in the growing need for integrated recycling solutions
- **LG multi-year strategic collaboration** for closed loop integrated solution **and $50 million investment in Li-Cycle** validates first mover advantage and business model
- **Li-Cycle is upsizing its Rochester Hub by 40%**, pulling forward capacity and commercial economics as the logical next step to securing increased demand for recycling
- **Focusing near-to-mid-term investment on expanding its Spoke & Hub network in North America** as well as Europe. Details regarding the Europe-specific strategy to be provided once ready
- Adequate **cash on hand to fund plans; Li-Cycle will continue to explore various green financing opportunities** to optimize capital efficiency, including but not limited to, credit from government-related institutions

(1) Once Li-Cycle's Hub achieves steady state operations, comparing Li-Cycle estimates to data from Benchmark Mineral Intelligence ("BMI").

Li-Cycle is a Leading Innovative and Sustainable Pure-Play Provider in Advanced Resource Recovery and Recycling

Investment Highlights

- **Sustainable Closed Loop Recycling Solution**
- **Proven & Patented Technology**
- **Commercially Contracted & Ready to Scale**
- **Robust and Integrated Customer Network**
- **Growing Electrified Market**
- **Regulatory Tailwinds**
- **High Barriers to Entry**
- **Leadership Experience & Compensation Tied to Execution**



Appendix

Li-Cycle is the Sustainable, Pure-Play Leader in Advanced Resource Recovery and Recycling

Targeting Closing the Supply Chain Loop

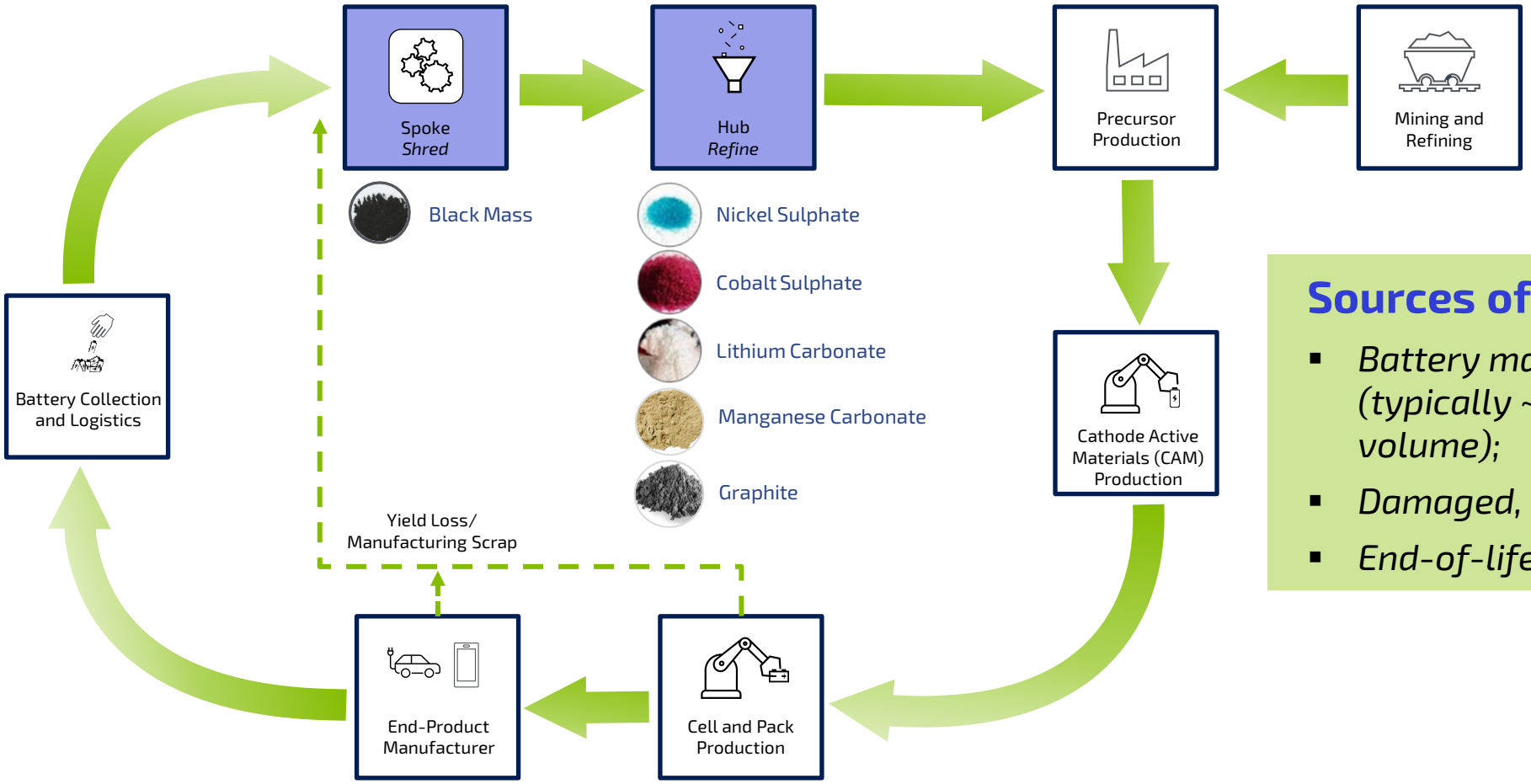
- **First mover** and IP protected **disruptive technology,** agnostic to lithium-ion battery chemistries
- **Lead sustainable recycling** with low environmental footprint
- **Solutions provider** for **critical battery materials** with high recovery rates
- **Scale with customers** through strategic and integrated Spoke & Hub network
- **Drive top tier growth** and **returns for shareholders**

Progress to 2025 Global Network Targets

- ✓ 4 Spokes to date in operation/construction totaling 30,000 t/y LIB equivalent Spoke processing capacity in North America
- ❑ Global network of **>100,000 t/y Spoke capacity**, deployed close to customer sources
- ✓ Upsized first Hub to 90,000 t/y LIB equivalent Hub processing capacity, pulling forward capacity and profitable growth
- ❑ Centralized network of **220,000-240,000 t/y Hub capacity**

Li-Cycle's Spoke & Hub Technologies™ Operating Model Enables Circular Loop in the North America EV Battery Value Chain

Li-Cycle TRAXYS Allocate key Hub end products to downstream customers



Sources of Recycling Feed

- *Battery manufacturing scrap (typically ~5-10% of the manufacturing volume);*
- *Damaged, defective, recalled batteries;*
- *End-of-life batteries*

Li-Cycle's Patented Spoke & Hub Technologies Enable Recycling Efficiency Rate of up to 95% versus Incumbents of up to 50%

Spoke

Shredding-based. No sorting, no discharging, minimal dismantling; automated process. No combustion-based operations

Pre-Processing

Hub

Directly treat using wet chemistry to recover battery grade chemicals, inclusive of lithium. No combustion-based operations

Post-Processing

Incumbent Recycling Chain/Processes

Batteries received, discharged, dismantled, and dry shredded

High temperature processing, burning off volatile components

Pre-Processing

Smelter – electric furnace process, processes black mass from pre-processing

Traditional hydromet refinery. Processes the electric furnace product, produces Ni, Co, Cu metals

Re-dissolve metals to produce Co & Ni chemicals (sulphates) that can be utilized in battery materials

Post-Processing

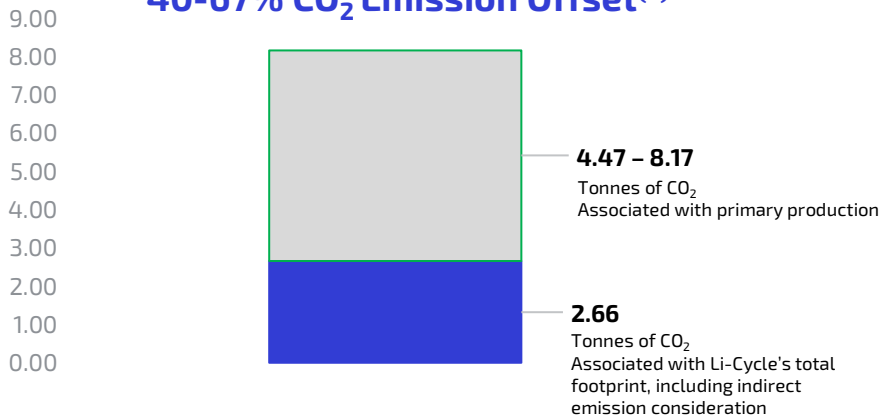
Sources: Li-Cycle market intelligence from independent sources, including SMM, Benchmark Mineral Intelligence and other independent sources.

Li-Cycle's Spoke & Hub Technologies™ Offer A Significantly Improved Emissions Profile Relative to Incumbent Mining & Refining Processes

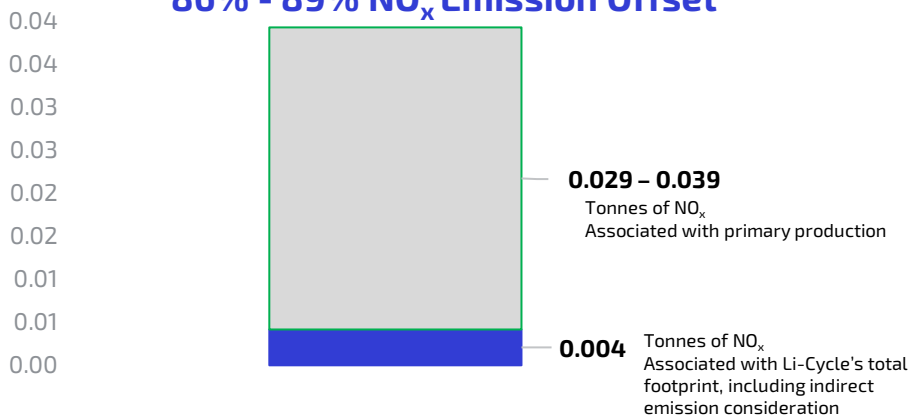
Process Life Cycle Environmental Footprint vs. Pyro Recycling and Mining and Refining[1,2]

~25-30% More Efficient CO_2 Emission Offset Compared to Pyrometallurgical-based Recycling[4]

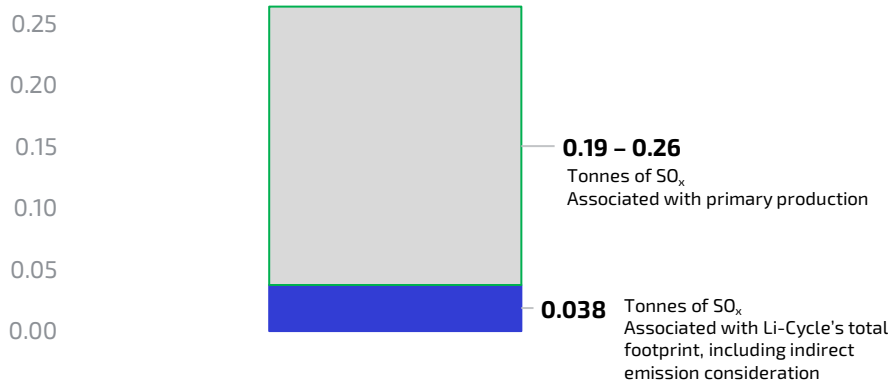
40-67% CO_2 Emission Offset[3]



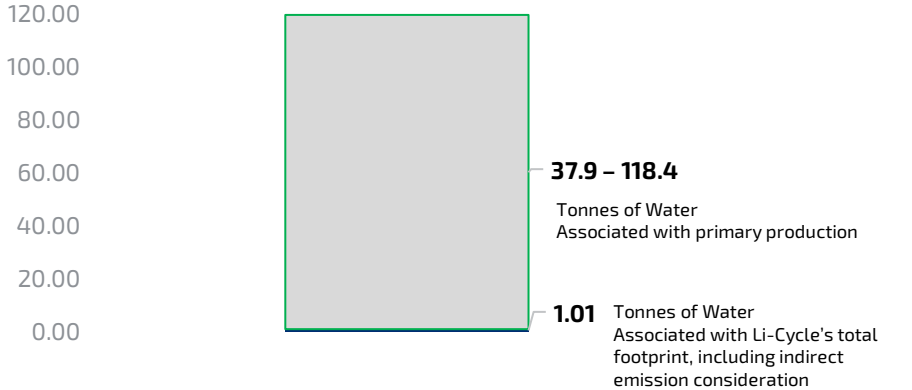
86% - 89% NO_x Emission Offset



80-86% SO_x Emission Offset



97%+ Water Usage Offset



(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 Life-cycle Assessment Results are fully loaded, i.e., inclusive of indirect costs not directly associated with the Spoke & Hub process, including but not limited to transportation of material.
(3) Li-Cycle's process offsets 40-67% of the CO_2 Profile of an EV Battery. The battery pack typically accounts for over ~40-50% of an electric vehicle's total CO_2 emissions profile (Source: Volkswagen AG).
(4) Li-Cycle's process achieves an estimated 25-30% CO_2 Offset Efficiency vs. Pyro Recycling, based on comparing Li-Cycle's LCA data to reference data from Argonne National Laboratory.

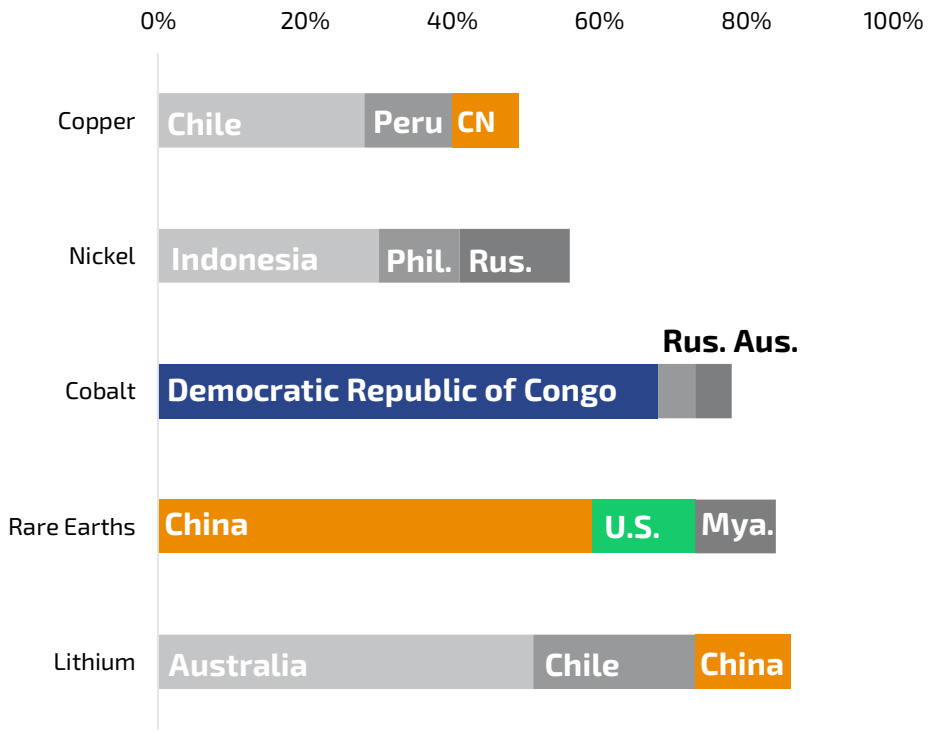
Growing Recognition of Critical Need for an Integrated Supply Chain in North America; Battery Supply Chain is Largely Controlled ex-North America

Legislative Focus on Advanced Battery Production & Recycling: US Bipartisan Infrastructure Bill

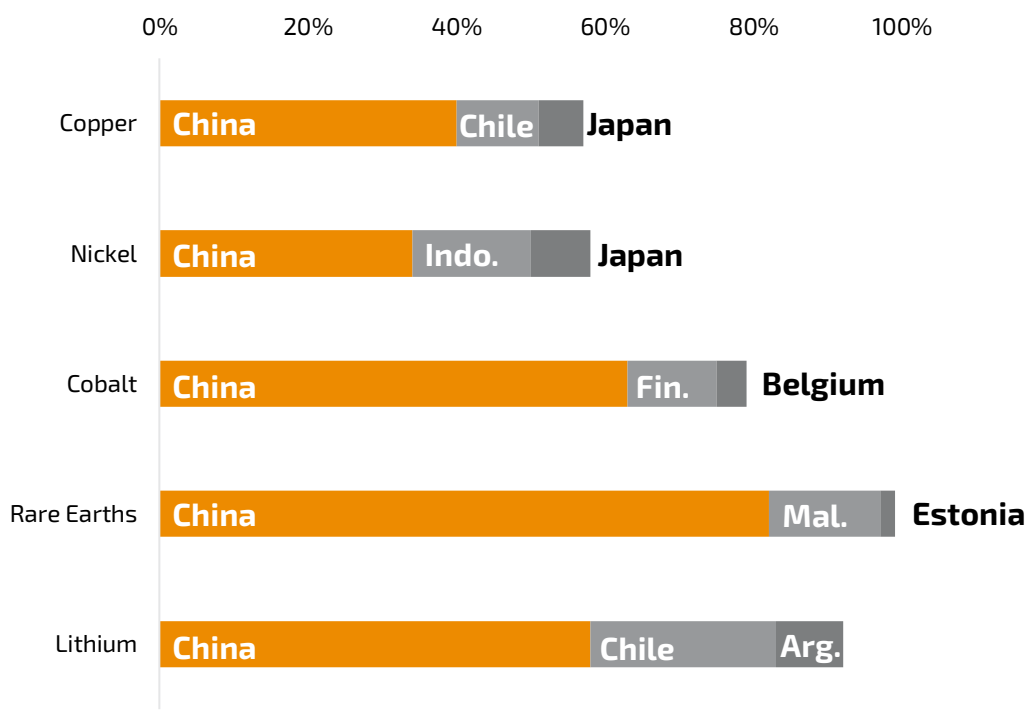
- **$3 Billion** for DOE grant program for battery materials and minerals processing, and refining of raw materials used in battery manufacturing
- **$3 Billion** for DOE grant program for battery components, advanced battery manufacturing and **recycling**
- **Bill signed into law November 15th** and funding programs are expected to be **implemented in 2022**

Current Supply of Critical Battery Materials by Region(1)

Primary Supply Sources



Processing Capacity



(1) Source: International Energy Agency (IEA).

Li-Cycle Expects to Be the #1 or #2 Domestic U.S.-Based Supplier of Battery Grade Advanced Materials[(1)]

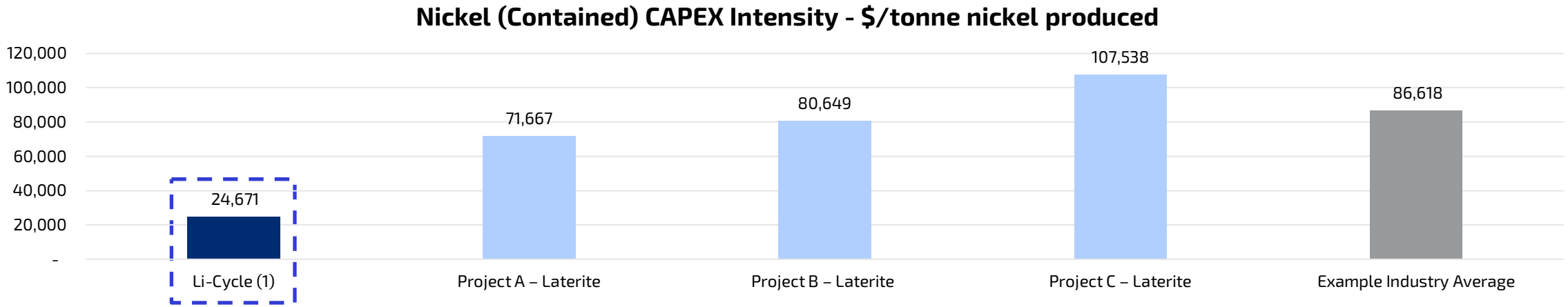
Li-Cycle expects Hub to position it as the leading U.S. based domestic source of critical materials upon commercial operation[(1)]

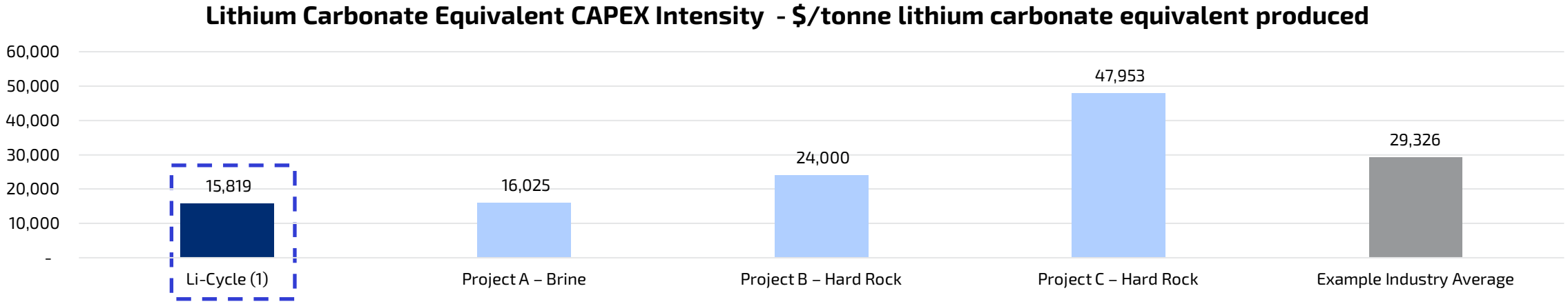
1. **First post-processing facility to come online** in North America; **access to favorable government-supported financings** favors first mover infrastructure developers
2. **Accelerating commercial supply and offtake** in North America
3. **Optimal economies of scale** with **favorable project economics and returns**
4. **IP Protected Process Technology** leverages proven process equipment and materials; **completed extensive validations of its Hub technology**, including a successful pilot plant and significant due diligence by several strategic and commercial partnerships
5. **Li-Cycle has an experienced management team** with successful hands-on project experience

Critical Material	Recycling / Secondary Source (e.g. metals recycling)	All Sources (Mining & Recycling)
Nickel	**#1** for Battery Grade Nickel Sulphate	**#1** for Battery Grade Nickel Sulphate; **#1** Nickel Source from all Nickel Sources
Cobalt	**#1** for Battery Grade Cobalt Sulphate	**#1** for Battery Grade Cobalt Sulphate
Lithium Carbonate	**#1** for Battery Grade Lithium Carbonate	**#2** for Battery Grade Lithium Carbonate

Sources: Benchmark Mineral Intelligence ("BMI") and Li-Cycle estimates.
(1) Once Li-Cycle's Hub achieves steady state operations, in comparison to data from Benchmark Mineral Intelligence as of calendar Q3 2021 for forecasted U.S. domestic production in 2024 from all production sources.

Upsized Hub Yields Optimized Capital Intensity Relative to Primary Supply Sources of Critical Battery Materials





On an approximate comparison basis, Li-Cycle's CAPEX intensities for nickel and lithium production are significantly lower relative to other example sources of these critical battery materials

Sources: Company announcements and Li-Cycle estimates.
(1) CAPEX intensity for Li-Cycle's Hub is pro-rated based on the end-product revenues as a fraction of the total revenue (which derives from many products).

Solving the global battery recycling problem

Li-Cycle®