



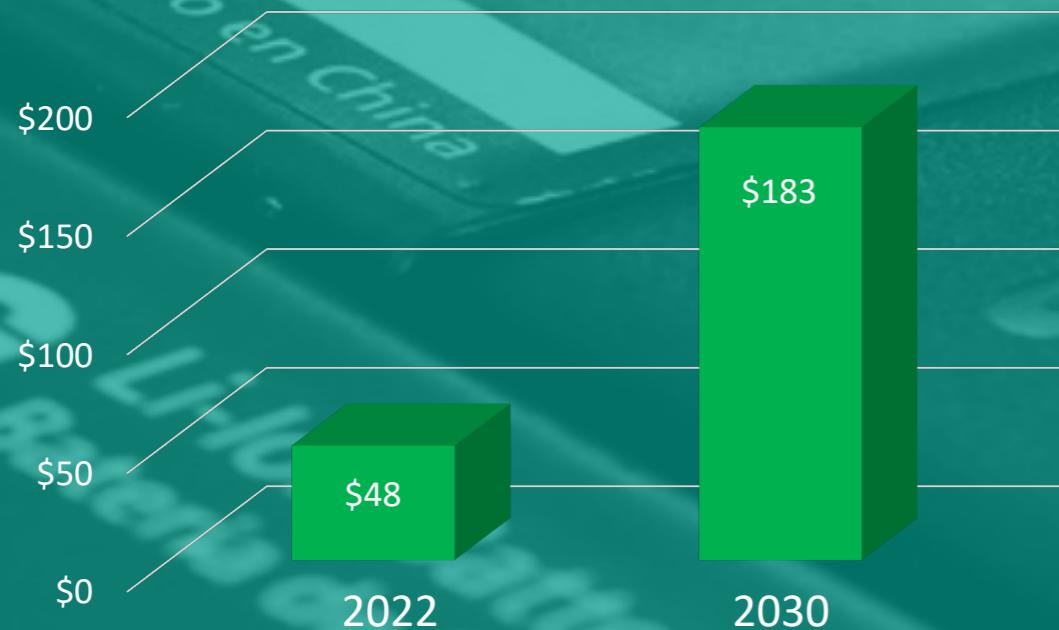
Enabling the circular economy solution
for lithium-ion batteries.



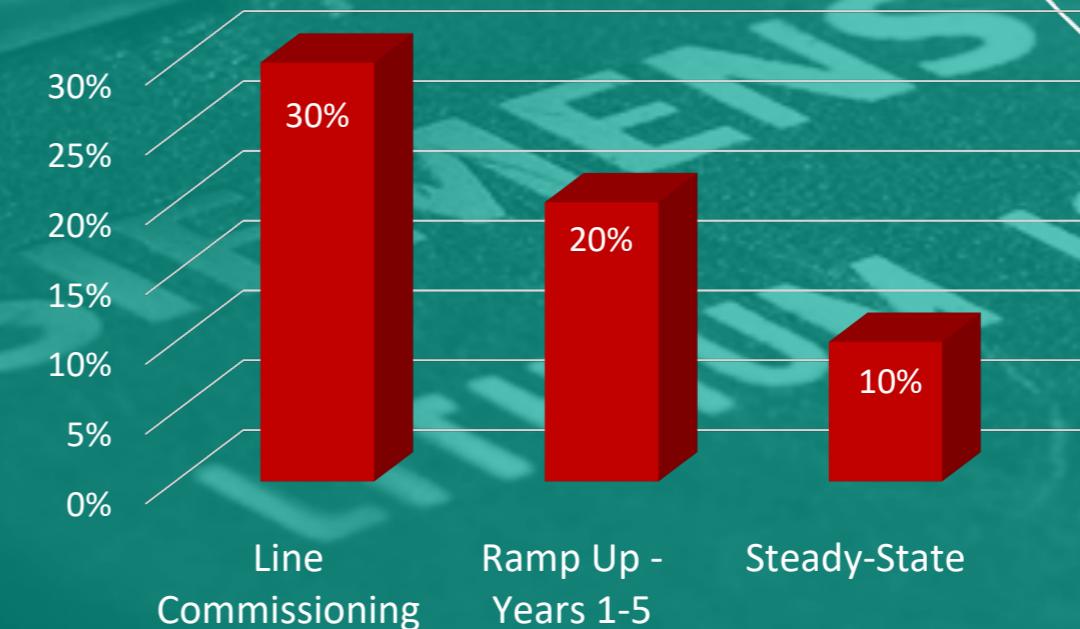


BATTERY RECYCLING MARKETPLACE

Lithium-ion Battery Global Revenue (\$B)



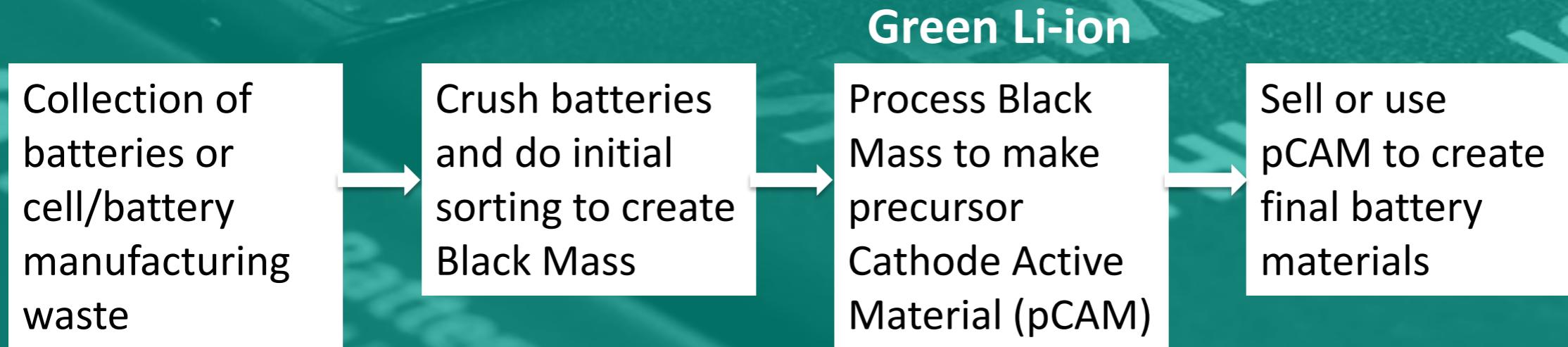
Cell Manufacturing Scrap Rate



By 2029 the IRA will require all li-ion battery materials to be domestically sourced. This will drive the value of recycled materials for li-ion battery recyclers in the USA.

GREEN LI-ION ENABLES

LI-ION RECYCLING FOR LEAD-ACID RECYCLERS, CATHODE MAKERS, AND CELL/BATTERY MAKERS



Green Li-ion

Sell or use pCAM to create final battery materials

pCAM to battery grade cathode materials, example:

- **NMC 111, 811, 622, 535**
- **Pure Lithium Carbonate**
- **CoSO₄, NiSO₄, MnSO₄**

Green Li-ion Lithium-Ion Batteries Recycling System



Benefits:

- Can process all Lithium-Ion battery types, without sorting and no toxic discharge.
- Only technology that skips production of mixed precious metal salts and produces reusable NMC cathode material (increasing profits).
- Uses a leaching process to remove graphite, advanced hydrometallurgical process to remove impurities and co-precipitation process to fully rejuvenate cathode materials.

Total floor space required: L-30m (98FT) x W-15.5m (50FT) x H-9.5m (31FT) with OH Crane

Unit Weight: 100m-tons Unit Dimensions: L-19.5m (64FT) x W-5m (16FT) x H-6.7m (22FT) (Main Skid Only)

5m (16FT) x 13m (43FT) (MLD Crystallizer – Outdoor Covered Space) + 1m (3FT) x 14m (46FT) (Scrubber, Indoor)

Black Mass Input:

- 738 m-ton/year
- 2 m-ton per day
- 4 batches per day
- 0.5 m-ton per batch

Tank 1:

- Removes graphite using leaching process/filter
- Industrial grade graphite (1 stage from battery grade)

Tank 2 (IP Solution):

- Removes impurities (hydrometallurgical process).

Impurities:

- Al – Aluminum
- Cu – Copper
- Fe – Iron
- P – Phosphorus
- Zr – Zirconium
- Zn - Zinc
- Ti - Titanium



Tank 3 Output

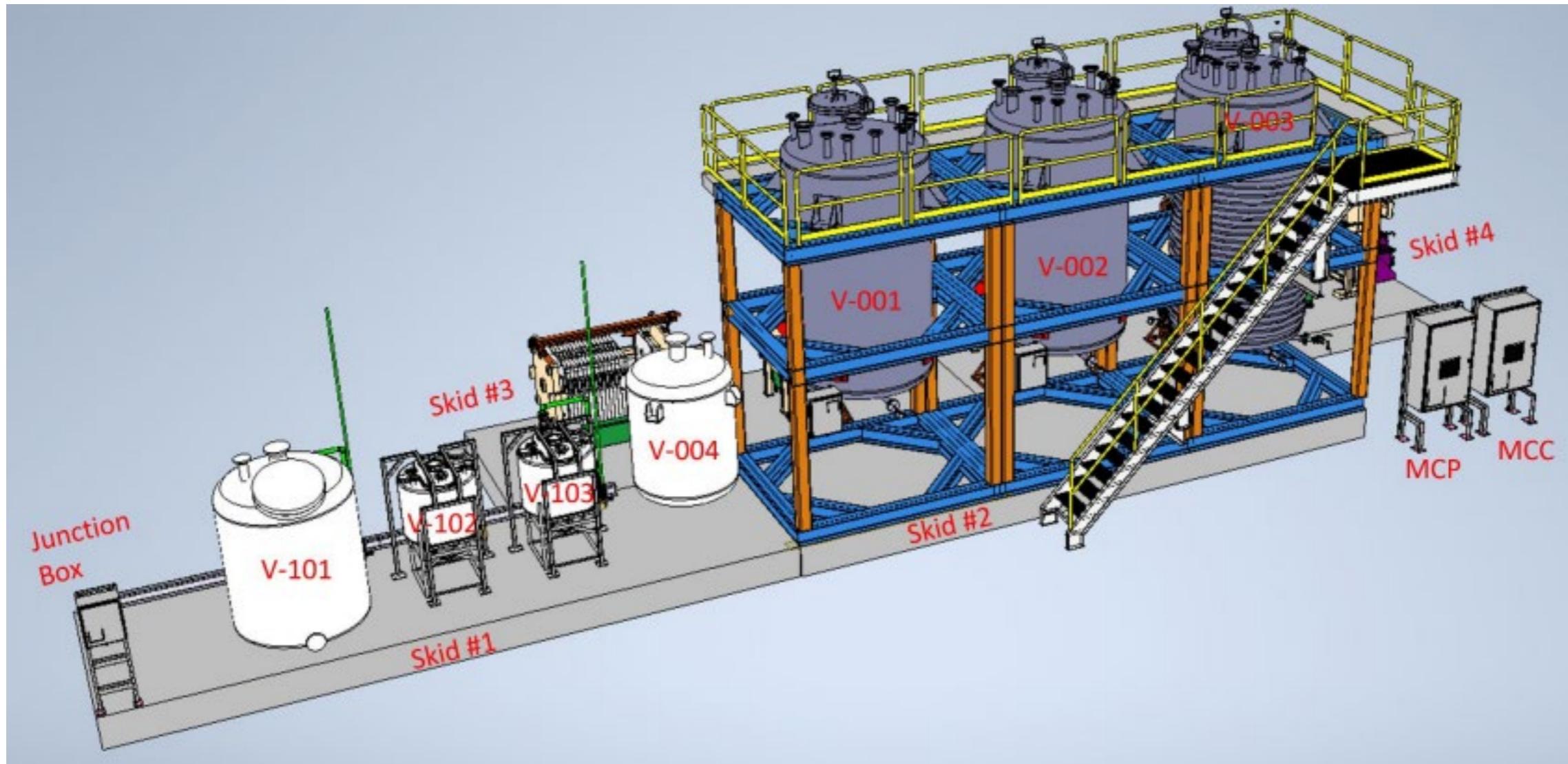
(Trade Secret)
Co-precipitation process:

- 99.9% Battery Grade PCAM

Tank 4 Output:

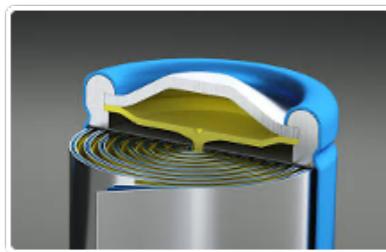
- 95% Lithium (Industrial Grade)
- Lithium precipitation process
- Remove water to increase lithium concentration with MLD.
- Reuse water to 1st tank. Very little waste water.

Green Li-ion GLMC 1.1



Our Clients

- ✓ Recyclers who now, or plan to, produce **black mass** from lithium-ion batteries or battery manufacturing scrap
- ✓ Black Mass is valued at **<\$5,000 per metric ton**



- ✓ Green Li-ion produces battery grade cathode material (pCAM)
- ✓ Valued at up to \$39,000 / metric ton
- ✓ Processes equivalent of <20 EV Batteries per day



Thank You



green
lion
strong results



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