Nth Cycle Update NAATBatt 2025

February 2025



NTH CYCLE



Executive Summary

WE'RE NOT BUILDING A REFINERY – WE'VE BUILT A REFINING SYSTEM



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Electro-Extraction

Our modern electrified solution for metal refining, developed & patented by Nth Cycle

DOMESTIC REFINING OF CRITICAL METALS







Co-located toll model

Our differentiated model offers a standard system fully integrated to partner sites, creating material value uplift

TARGET PARTNERS

SCRAP RECYCLERS

MANUFACTURERS / OEMS

MINERS

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Clear growth plan

Global pipeline of tolling contracts; advanced R&D across multiple commodities

IN PRODUCTION NOW > FAST GROWTH

Operational within 12 months, permitted in 6 months

3,000tpa – current site

30,000 tpa – 6 sites by 2027

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New modular tech

Lower GHG, unit cost & capital intensity compared to traditional refining routes, even at small scale

ENVIRONMENT & COST FOCUS





OUR ADVANTAGE

WITHOUT NTH CYCLE

Years of Permitting, Billions of Dollars

Inflexible Production

Materials Transported to Central Facilities

Waste-Producing Tech

Fixed Output for One Industry

We can refine metals cleanly and safely anywhere.



NTH CYCLE

WITH NTH CYCLE Market Ready Instead of the promise of domestic refining years away, we're able to meet the speed needed to match local supplies of materials and all legislative requirements today.

Modular

A fully customizable platform designed to produce the critical metals needed now, and adjust to changing volumes, feedstocks, and specifications as needed.

Co-located

An unmatched end-to-end refining solution that seamlessly integrates with our partners' equipment, at their facility, and converts spent batteries, ore, or scrap into metal products they own.

Clean

The industry's cleanest metal refining technology that accelerates net zero targets by eliminating the environmental damage of smelting and the chemical waste of hydrometallurgy.

Universal

Produces a universally accepted, high-value final product for consistent, reliable end-use across clean energy markets



OUR DEPLOYMENTS

Ohio facility – our commercial production site for Partners

First MHP produced from scrap in the United States

DETAIL

Location

Nameplate

Feedstock

Products

Permitting

Constructio

Building siz

PURPOSE

Independent refining of black mass and Ni-Co scrap

Partner material processing in advance of co-located toll partnerships

Market validation of high-quality domestically-refined product

Proof of electro-extraction technology, data to optimize toll fee & structure

Define & prove "standard system", optimize for toll partnerships

Prove ability to re-purpose brownfield facility





	Fairfield, Ohio
e capacity	Up to 3,000 tpa
	Ni/Co scrap (including black mass)
	High-purity MHP
	Li carbonate
	Industrial grade graphite
	<6 months
on	12 months
ze / system size	20,000 sq ft / 10,000 sq ft

Nth Cycle Ohio Project: Case Study

FUNDING	 Nth Cycle corporate sources Project to mitigate major project risk, allowing access to Project Financing sources for future deployments 	
SITE	 Existing industrial building under a lease 	
PERMITTING & BUILD	 6 months / 12 months 	
CONSTRUCTION	 EPC based on a cost plus under a wrap including GMP and liquidated damages 	Offices & lab
FEEDSTOCK	 Purchases of Black Mass from several potential partners Future projects under Tolling Agreements with those partners at their sites 	
OFFTAKE	Offtake Agreement with global marketing agent	







OUR NMC PRODUCT



Nth Cycle's high-purity NMC

99% Co, Ni, Mn

100% recycled content

Produced through a continuous flow process, the electro-extraction process yields hydroxides of the right particle size (<20 microns) and morphology for pCAM use, generating a universally acceptable product that has the potential to be used as pCAM material (tests completed and in progress with ORNL and partners).

Domestically Produced - IRA and EU Battery Passport compliant

The product is refined from domestic black mass and Ni-Co scrap sources, meeting IRA and EU Battery Passport requirements.

Low GHG/ESG compliant

The product is produced through a cleaner technology from recycled content, meeting circularity demands from refiners and OEMs with significantly reduced emissions (~44%) vs. similar recycled products produced from pyrometallurgy or hydrometallurgy.

NTH CYCLE

High-purity product (> 99.3%). Nth Cycle's hydroxide product has low levels of deleterious elements (e.g., Al, Ca, Cu, Fe, Mg, Zn).

Universally-acceptable input for downstream refiners. Nth Cycle's hydroxide product reduces the complexity and variability of processing different types of black mass or Indonesian MHP with high spec variability.

Potential to be used as pCAM material





