

Senior Systems Engineer

WHO WE ARE

Demand for critical minerals to power the energy transition is growing exponentially. Yet, we know mining deeper and broader, and building landfills higher and wider, works against our fight to save the planet. At Nth Cycle, we see the path forward. We believe the critical minerals needed for the energy transition are already in circulation today. We just didn't have a clean, profitable way of retrieving them, until now.

Nth Cycle is a metal processing technology company. Our electro-extraction technology helps recyclers and miners capture more critical minerals—for use in lithium-ion battery manufacturing, among other things—while dramatically reducing costs and emissions. We are the heart of metals processing; we are the crucial step that profitably separates critical minerals from other elements, transforming them into production-grade feedstocks for the energy transition.

OUR CULTURE

You won't find another team like ours. We believe in open, honest communication, and enjoying our work while changing the world. And we value the perspectives and opinions of our colleagues while pushing each other to excel.

We're a dynamic team looking for a new team member who's also passionate about addressing climate change and advancing the clean energy industry. Consistent with our commitment to diversity & inclusion, we value colleagues with the ability to work on diverse teams and with a diverse range of people.

If this is you, keep reading.

JOB OVERVIEW

The Senior Systems Engineer will lead in the design, integration, and performance optimization of Nth Cycle's electroextraction systems, ensuring that mechanical, electrical, process, and controls subsystems work together reliably at pilot and commercial scale. This role requires strong technical leadership, the ability to manage complex cross-disciplinary trade-offs, and hands-on experience taking systems from design through deployment.

KEY RESPONSIBILITIES

- Own system-level architecture and requirements definition for Nth Cycle's electroextraction platforms
- Lead integration efforts across mechanical, electrical, process, and controls engineering teams to ensure systems meet performance, safety, and reliability targets
- Drive design reviews, trade studies, and risk assessments at the system level
- Define and oversee verification and validation plans, including system-level testing and commissioning
- Lead root-cause analysis and corrective/preventive action efforts for complex, cross-disciplinary issues
- Mentor and provide technical guidance to junior engineers
- Partner with manufacturing, supply chain, and field service teams to ensure designs are manufacturable, serviceable, and scalable
- Support scale-up efforts from pilot to commercial deployment, including site installation and commissioning support
- Contribute to and help mature systems engineering processes, tools, and documentation standards across the organization
- Communicate technical status, risks, and trade-offs clearly to leadership and, as needed, customers or partners

Required Qualifications

- Bachelor's degree in Systems Engineering, Mechanical Engineering, Electrical Engineering, Chemical Engineering, or a related field (Master's preferred)
- 7+ years of experience in systems engineering or a closely related discipline, ideally in industrial, process, energy, or chemical/electrochemical systems
- Demonstrated experience leading system architecture, integration, and V&V efforts on complex hardware systems
- Strong understanding of how mechanical, electrical, process, and controls subsystems interact
- Experience taking systems from design through pilot or commercial deployment
- Proven ability to lead cross-functional technical teams and mentor junior engineers
- Excellent communication skills, with experience presenting to technical and non-technical stakeholders

Preferred Qualifications

- Direct experience with electroextraction, electrowinning, electrorefining, or related electrochemical/hydrometallurgical systems
 - Experience with critical minerals, battery recycling, or metals processing industries
 - Familiarity with systems engineering frameworks/tools (e.g., INCOSE practices, requirements management software)
 - Experience supporting field commissioning and startup of industrial equipment
 - Track record of contributing to patents or technical publications
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What we offer

- Competitive salary and equity
 - Comprehensive health, dental, and vision benefits
 - Opportunity to make a direct impact on decarbonization and critical minerals supply chains
 - Collaborative, mission-driven team culture
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SALARY RANGE

\$130K - \$170

LOCATION

Burlington, Massachusetts

To apply, contact careers@nthcycle.com

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nthcycle.com