



# Career Pathway Spotlight: Discover a Career in the Battery Industry Downstream

## Discover your career in clean energy!

The **Downstream** sector assembles finished battery cells into battery packs to integrate into end-user products like electric vehicles. The Downstream sector also recycles spent batteries, capturing value from battery minerals through reclamation. Useful skills and credentials include:

**For Technical Careers:** technical or mechanical acumen, ability to carry or lift heavy loads, Advanced Manufacturing Certificate (from Manufacturing Skills Institute), and Battery Technician Microcredential (from New Energy New York).

**For Engineering Specialties:** knowledge of electrochemical processes, knowledge of metallurgy and mineral refining, advanced degree in engineering discipline, degree-appropriate licensure, and specialty training for minerals of interest.

**For All:** experience in the manufacturing or recycling industry, background or general knowledge of mineral recycling and advanced manufacturing, experience working at industrial sites, experience working in noisy environments, and ability to wear Personal Protective Equipment (PPE) for duration of scheduled shift.

## SAMPLE ROLES

### Technical Careers

- Plant operators
- Assembly line workers
- Quality control specialists
- Disassemblers and scrappers
- Mechanics and repair workers

### Engineering Specialties

- Chemical and electrical engineers
- Metallurgical specialists
- Process engineers
- Industrial chemists and industrial hygienists

## OCCUPATIONAL SKILLS

- Critical thinking and problem solving
- Reading comprehension and writing ability
- Social awareness and willingness to follow direction
- Communication and team-oriented attitude
- Attention to safety, industrial risks, and process hazards

## BENEFITS

### These energy industry careers offer:

- Varied opportunities
- Upward and continued career growth
- Work-life balance—your work stays at work
- Opportunities for skill development
- Unionization and leading benefits
- Good pay and interesting work

# Required Occupational Skills

## In the Downstream Sector of the Battery Industry



### ACROSS THE ENTIRE BATTERY INDUSTRY

The Downstream battery industry needs employees at all levels, including roles like **HR, electricians, IT support, welders, salespeople, truck drivers, administrative support, foodservice, and custodial support**. Contribute to U.S. national security by bringing your expertise to the battery industry. Pivot to a rewarding and well-paid career in energy!

### TECHNICAL CAREERS

#### What knowledge, skills and abilities will you need to succeed?

- Show up to work on time and be prepared
- Ensure correct assembly and wiring of battery packs and pouches and adherence to process guidelines
- Follow best practices and regulations to ensure the safety of your work area
- Adhere to manufacturing guidelines set forth for each individual product or output
- Retain and apply information learned from on-the-job trainings
- Operate production equipment used to solder, wire, and connect battery packs
- Test each battery cell and component prior to assembly into finished pack
- Understand hazards present in recycling
- Minimize introduction of impurities and contamination during final assembly
- Comply with national and site-specific environmental guidelines
- Disassemble battery packs safely, distinguishing between cell chemistries
- Take adequate measures to ensure safety and purity during recycling process
- Always wear appropriate PPE including respirators, personal gas detectors, and hearing protection

### ENGINEERING SPECIALTIES

#### What knowledge, skills and abilities will you need to succeed?

- Review and provide feedback on current site practices
- Provide guidance on manufacturing and recycling processes and output quality
- Follow best practices and comply with regulations to ensure the safety of your work area and your fellow workers
- Ensure factory operations are in compliance with national and site-specific environmental guidelines
- Act as a subject matter expert for your specific domain, enabling management to make key decisions regarding profitability of recycling operations
- Report workplace safety concerns to appropriate personnel
- Stay current on refresher trainings and continuing education requirements for your professional certifications
- Review assay results to ensure reclaimed material is within specified parameters
- Ensure safe continuation of final assembly and recycling processes per site-specific operations guide
- Understand how the outputs of your business function are used by other sectors of the battery industry
- Use process knowledge to advise and implement improvements in efficiency, output quality, or use of resources
- Maximize recovery of usable material from recycled battery cells



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