LITHIUM-ION BATTERY COLLECTION PROGRAMS:

FOUR NC BUSINESSES, FOUR APPROACHES

The case studies below represent a range of industries. Each has developed a system that works within their operational constraints.

1. Harbor IT

INDUSTRY: IT asset and technology services **BATTERY VOLUME:** Variable

Harbor IT is a North Carolina-based IT services company specializing in network infrastructure, IT support, and cloud solutions for small businesses. They work with Powerhouse Recycling, who picks up battery-embedded devices on an as-needed basis, making the process seamless and reducing handling requirements for Harbor IT staff.

By working with a pickup-based recycler, Harbor IT avoids the need to manage battery extraction, specialized storage, or outbound shipping logistics.

KEY TAKEAWAYS

- Recyclers like Powerhouse Recycling eliminate the need for outbound logistics on the business's end.
- Leaving batteries inside devices simplifies handling and reduces safety risks compared to individual cell storage.
- An as-needed service model is well-suited to businesses with variable or unpredictable battery volumes.

2. Undead Electronics

INDUSTRY: Laptop refurbishment and resale **BATTERY VOLUME:** Medium

Undead Electronics focuses on laptop batteries, which accumulate in meaningful quantities through their device refurbishment process. Rather than treating recycling as a cost, Undead Electronics has turned it into a modest revenue stream: they take their batteries directly to Foss Recycling, which pays them for the material.

This arrangement works because laptop batteries tend to be larger format, containing more recoverable material per unit. Foss stores batteries by taping the terminals, packaging them in smaller boxes and then aggregating them in larger boxes to reduce contact and movement during shipping. They have partnered with BlueSky Solutions, an electronic recycler to process and recycle their batteries.

KEY TAKEAWAYS

- Battery type matters, larger format batteries (like laptops) are more likely to have scrap value.
- Developing a direct relationship with a recycler can turn disposal cost into revenue.
- Businesses with a consistent, identifiable battery stream are well-positioned to negotiate with recyclers.

3. Electronics Repair Shop

INDUSTRY: Consumer electronics repair **BATTERY VOLUME:** Small to medium

This Raleigh-based repair shop handles a steady stream of lithium-ion batteries swapped out when repairing devices such as smartphones and tablets. Safety and proper containment are the top priorities. Staff remove or tape over battery terminals when possible before storage, and each battery is individually placed in an anti-static bag before being packed into specially designed shipping boxes.

The shop sources these boxes through The Battery Network, a national program that provides compliant shipping containers for battery collection. Once a box is full, it is shipped to an Alliance Fulfillment Center for processing and recycling.

KEY TAKEAWAYS

- Terminal taping and anti-static bagging reduce short-circuit and fire risk during storage.
- The Battery Network provides compliant packaging, removing a key logistical barrier for small shops.
- A box-based model allows batteries to accumulate safely until a shipment is ready, with no minimum pickup required.

4. Bicycle Chain

INDUSTRY: Specialty bicycle retail **BATTERY VOLUME:** Small to medium

Bicycle Chain, a North Carolina-based specialty bicycle retailer, manages lithium-ion batteries from e-bikes, a rapidly growing cycling trend. They use The Battery Network, receiving special shipping boxes into which spent batteries are placed as they accumulate. When a box is full, it is shipped out for recycling.

Importantly, Bicycle Chain has made a deliberate business decision: the cost of recycling is built into the price of their products. Rather than absorbing it as a separate overhead expense or passing it along as a surprise fee to customers, it's factored into their pricing model from the start. This approach ensures that recycling is sustainable for the business long-term and that consumer prices reflect the true cost of battery management.

KEY TAKEAWAYS

- The Battery Network is a workable solution for specialty retailers managing lower volumes of larger-format batteries.
- Retailers selling battery-powered products should plan for end-of-life battery management from the start.

The Bottom Line

There is no single right answer for how a small business should handle lithium-ion battery recycling, but there is a right starting point: taking the question seriously and finding a system that fits your operation. These four businesses demonstrate that responsible battery recycling is achievable, even for the smallest shops. Each arrived at a workable solution by identifying a recycler or program suited to their battery type and volume, establishing a consistent collection and storage routine, and deciding how to handle the associated costs.

If your business generates lithium-ion batteries and you're unsure where to start, the NC DEQ Recycling Business Assistance Center (RBAC) is here to help.

FOR MORE INFORMATION on setting up a collection program, procedures for safe storage and handling, or receiving outreach materials and grants, visit batterysafe.nc.gov or email recycleright@deq.nc.gov.

The N.C. Division of Environmental Assistance and Customer Service (DEACS) is a non-regulatory division of N.C. DEQ offering technical and financial assistance to businesses, manufacturers, local governments, institutions, economic developers, and citizens in environmental management. For questions, call 1-877-623-6748.