

**ENERGY PEAK  
SHAVER**



# Make Money

## Repairing Batteries

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**Battery Repair Business Idea**

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### **Please Remember**

**Safety First!** Everything you do that is related to your DIY project is at your own risk. Please use safety precautions at all times. If you do not understand something or not feel comfortable doing something – consult a professional.

**Have fun, enjoy, and good luck!**

# Battery Repair Business Idea

Portable devices have seen a substantially increase in numbers in the past years. There are more and more electric vehicles like e-scooters and e-bikes coming into the market.

The downside about the fast increasing number of this type of vehicles and devices is that not too many know how to repair such new devices, and most of the portable devices end up in the trash once the battery becomes faulty due to high costs of replacing them.

This is where we, the DIY'ers, can step in and create a successful business out of it.

There are multiple ways to monetize from this type of business and you will have to pick the one that's right for you and for the location you live in.

I will get a bit technical at some points, but this information is vital for you to understand how this business works and to help you picking the right track to monetize from this venue.

**Let's get started!**

[Recycling 18650 lithium batteries recovered from laptop batteries, power tools, electric vehicles](#)

This endeavor is one of the easiest to get started with due to the tones of e-waste that already exists. It is easy to find and extract cells from a lots and lots of types of product.

How this works?

Majority of devices are using lithium-ion batteries with 18650 type cells. They became very popular because of the multitude of configurations you can pair them into, such as high capacity configuration or high voltage configurations.

There are multiple types of Li-ion cells:

1. The first type is used in devices that are not very power demanding but they need to have a big capacity. We call them, “High Capacity & Low Discharge Rate Cells”

Example of such devices are:

- Laptops
- Regular Flashlights With Lithium Batteries
- Power Banks
- Internet Modems

Usually the cell capacity in these devices is above 2500 mAh and the discharge rate is 1C to max 2C.

### ***Short explanation about Capacity Rate of a cell:***

*A battery’s charge and discharge rates are controlled by battery C Rates. The battery C Rating is the measurement of current in which a battery is charged and discharged at.*

*The capacity of a battery is generally rated and labelled at the 1C Rate (1C current), this means a fully charged battery with a capacity of 10Ah should be able to provide 10 Amps for one hour.*

*That same 10Ah battery being discharged at a C Rating of 0.5C will provide 5Amps over two hours, and if discharged at a 2C Rate it will provide 20 Amps for 30 minutes.*

*The C Rating of a battery is important to know as with the majority of batteries the available stored energy depends on the speed of the charge and discharge currents.*

### **How to calculate C Rating of a battery**

*A battery’s C Rating is defined by the rate of time in which it takes to charge or discharge.*

The formula is simple:

$$t = \text{Time}$$

$$Cr = \text{C Rate}$$

$$t = 1/Cr \text{ (to view in hours)}$$

$$t=60 \text{ minutes}/Cr \text{ (to view in minutes)}$$

*Example: 0.5C Rate example*

- 2300mAh battery
- 2300mAh /1000 =2.3A
- 0.5C x 2.3A = 1.15A available
- 1 / 0.5C=2hours
- 60 / 0.5C=120 minutes

So a 2500 mAh cell can be discharged with 2.5 Amps hour without damaging the cell.

This kind batteries usually get unbalanced when put inside a pack and the Battery Management Circuit cannot keep the pack running anymore.

**The value of this kind of cell after you test it, is between 0.9 USD and 1.5 USD**, depending on the capacity of the cell. Most of the clients that buy cells for storage will not care too much of the low discharge rate, because they will use multiple cells in parallel to match the demand of their system.

The business model is based on :

Going at recycling companies that collect electronic devices, laptop batteries, power banks etc. and purchase the used batteries from them.

Your job will be to disassembly the batteries and clean the cells from the packs. You will see exactly how it's done by watching the Energy Peak Shaver guides.

After you test the cells, you can sell them on Facebook Groups, Ebay, Craigslist or other marketplace websites that you know of.

Some users started their own website and grew their business to processing 2000 cells per day.



2. The second type of cell, are the Mid Range cells. They are usually between 2200 and 2800 mAh and can support up to 3C discharge rate.

You can find this kind of cells in the following devices:

- E-Bikes
- E-Scooters
- E-Cars

The price of these cells varies between 1.2 USD to 1.8 USD. Depends on capacity and discharge rate of those cells.

To know precisely what is the discharge rate of the cells, I will give you access to a lithium cells database where you can see the datasheet of each type of cell and that will help you price your cells accordingly and focusing only on quality cells.

3. The third type of cells are the High Discharge and Low Capacity Cells.

This kind of cells are used in power tools and the capacity varies between 1500 to 2500 mAh. The 2500 mAh with high discharge being the most expensive.

There are some exceptions like Samsung HG2 cells which have a discharge rate of 6C and capacity of 3000. But they are 10 USD a piece and are quite rare to find in broken devices now because they are new on the market.

The high discharge cells can be found in the following type of devices:

- Portable Power Tools
- E-Motorbikes
- Leaf Blowers
- Some Medical Equipment

**Price varies between 1.4 to 2 USD per tested cell for high discharge cells.**

This information will get you started in the right direction. This guide is new and I will continue updating it, adding more information at no extra cost to you. You will get notified by e-mail when new info comes in.

We will cover the entire process and all the tools necessary to speed up the process in this guide as well, but for now you can find this information in the Energy Peak Shaver that you purchased with this guide. This will become a separate manual in the future.

## How to get started

Easiest way to get started is to check ebay for used batteries. Just type “lithium battery” or “laptop batteries” and look for deals where you can buy multiple packs for smallest price. My advice is not to invest more than \$50 to \$100 to get started.

The nice part of this business is that you can get a taste of it with a very small investment.

Another way to find cheap batteries, is to go to laptop repair shops and ask them for dead batteries. Some of the shops will give them for free. They will be curious to learn what you want to do with them, try not to give too much details, say that you will use for a personal project or something along these lines, otherwise they will get the feeling that you are making money and realize that their batteries are worth something and will start charging you more for the same batteries.

In time after you get the business going, you can have some contracts with some of the shops that give you quality batteries to work with and share the profit you are making. But be sure who you partner with, you must pick those partners properly to avoid future headaches.

The recycling companies are the jackpots, you can find literally tons of batteries very cheap. You can get them very cheap, but make sure they will allow you to pick only the batteries you want and not give you the other trash. Buying hundreds of pounds of batteries will raise some legal issues and that should be

considered for future. You must have your business legal and a lot of approvals to process batteries. But for getting started and buying small quantities at a time, processing them carefully, will get you on the right track.

These are the three main sources for used lithium batteries. Check them all and find the best deals you can pick from, that's the way to make the most of the profits. Look for those free batteries sources as you will love the profits you can make from those deals.

## Hazards

Batteries in general are dangerous if not handled properly. Make sure you follow all the steps we show in the Peak Shaver video guides and also do your due diligence and research before starting dismantling batteries. This business is profitable, but you need to make sure you do it as safe as possible.

Some Don't's you should be aware of:

### **DON'T's:**

- Don't disassembly batteries in the house you live, especially if kids are around. Try setting your workshop in a shed that's not connected to the house or a small container. A garrage might be OK to use, but you need to be organized and don't leave batteries lying around so others could mess with them.

- Pocking a battery with a screwdriver can make it instantly ignite or release dangerous fumes for inhaling.
- Don't use powertools to drill into battery cases or into cells. Powertools are dangerous to use because if your hands slip during operation, you can easily damage batteries and bad things will happen.



- Don't try to recondition physically damaged cells, those cells are dangerous to be reused and electrolyte can drip from them easily if the case is not intact.



We will expand this document and add videos in the near future. Stay tuned as you will receive free updates for this guide. It's a new product and we want to make sure we include all the relevant information for establishing a business reconditioning batteries.

I wish you all the best!

Stay safe!