

2008 - 2009 PRICE ANALYSIS OF CONSUMER BATTERIES

Analysis based on information posted 12/23/08 at websites of Bearwobble.Com, RadioShack, Walmart, and Circuit City.

With price of charger, electricity, and 22 Bearwobble batteries included, our Energy Saver Survival Kit saves you 416% over the least expensive alkalines shown below. You'll not find better prices anywhere on **fresh, full capacity, Low Self Discharge NiMH batteries.**

| STORE | BRAND | SIZE | TYPE | RECHARGE | LSD | Capacity in mAh (milli Amp hours) | PRICE PER BATTERY | Actual battery cost for 100 Amp Hours | Recharge cost of electricity for 100 amp hours at 11c per kilowatt hour (kwh). | Cost of charger (\$50 amortized over 50 batteries and 10 years) | Total Cost for 100 amp hours | Percent Savings provided by 1 NiMH battery - compared to least expensive Alkaline. |
|--------------|---------------|------|----------|----------|-----|-----------------------------------|-------------------|---------------------------------------|--|---|------------------------------|--|
| Bearwobble | AccuEvolution | 9v | NiMH | YES | YES | 200 | \$9.98 | \$1.66 | \$0.096 | \$0.100 | \$1.86 | 269% |
| Radio Shack | Lenmar | 9v | NiMH | yes | no | 120 | \$10.99 | \$3.05 | \$0.096 | \$0.100 | \$3.25 | |
| Radio Shack | Radio Shack | 9v | NiMH | yes | no | 150 | \$14.29 | \$3.18 | \$0.096 | \$0.100 | \$3.37 | |
| Radio Shack | Radio Shack | 9v | Alkaline | no | no | 500 | \$2.50 | \$499.50 | | | \$499.50 | |
| Circuit City | Energizer | 9v | Alkaline | no | no | 500 | \$3.50 | \$699.00 | | | \$699.00 | |
| Radio Shack | UltraLife | 9v | Lithium | no | no | 1200 | \$12.79 | \$1,065.83 | | | \$1,065.83 | |
| | | | | | | | | | Batteries rated at 8.6v; 100 amp hours = 0.88 kwh. | | \$0.00 | |
| Bearwobble | AccuEvolution | AAA | NiMH | YES | YES | 900 | \$2.49 | \$0.09 | \$0.015 | \$0.100 | \$0.21 | 637% |
| Radio Shack | Lenmar | AAA | NiMH | yes | yes | 850 | \$2.50 | \$0.10 | \$0.015 | \$0.100 | \$0.21 | |
| WalMart | Energizer | AAA | NiMH | yes | no | 1000 | \$2.72 | \$0.09 | \$0.015 | \$0.100 | \$0.21 | |
| Radio Shack | Lenmar | AAA | NiMH | yes | no | 1000 | \$2.92 | \$0.10 | \$0.015 | \$0.100 | \$0.21 | |
| Circuit City | Energizer | AAA | NiMH | yes | no | 1000 | \$3.25 | \$0.11 | \$0.015 | \$0.100 | \$0.22 | |
| Radio Shack | Radio Shack | AAA | NiMH | yes | no | 700 | \$5.00 | \$0.24 | \$0.015 | \$0.100 | \$0.35 | |
| Radio Shack | Radio Shack | AAA | Alkaline | no | no | 850 | \$1.12 | \$132.06 | | | \$132.06 | |
| Circuit City | Energizer | AAA | Alkaline | no | no | 850 | \$1.12 | \$132.21 | | | \$132.21 | |
| Circuit City | Energizer | AAA | Lithium | no | no | 1250 | \$3.25 | \$259.80 | | | \$259.80 | |
| | | | | | | | | | | | \$0.00 | |
| Bearwobble | AccuEvolution | AA | NiMH | YES | YES | 2250 | \$2.49 | \$0.04 | \$0.015 | \$0.100 | \$0.15 | 301% |
| Radio Shack | Lenmar | AA | NiMH | yes | yes | 2150 | \$3.15 | \$0.05 | \$0.015 | \$0.100 | \$0.16 | |
| Radio Shack | Lenmar | AA | NiMH | yes | no | 2700 | \$3.12 | \$0.04 | \$0.015 | \$0.100 | \$0.15 | |
| Radio Shack | Lenmar | AA | NiMH | yes | no | 2000 | \$2.92 | \$0.05 | \$0.015 | \$0.100 | \$0.16 | |
| WalMart | Lenmar | AA | NiMH | yes | no | 2500 | \$4.72 | \$0.06 | \$0.015 | \$0.100 | \$0.18 | |
| Radio Shack | Radio Shack | AA | NiMH | yes | no | 2500 | \$6.50 | \$0.09 | \$0.015 | \$0.100 | \$0.20 | |
| Radio Shack | Radio Shack | AA | NiMH | yes | no | 2000 | \$5.00 | \$0.08 | \$0.015 | \$0.100 | \$0.20 | |
| Circuit City | Energizer | AA | Alkaline | no | no | 2000 | \$0.92 | \$45.75 | | | \$45.75 | |
| Radio Shack | Radio Shack | AA | Alkaline | no | no | 2000 | \$0.94 | \$46.81 | | | \$46.81 | |
| Circuit City | Energizer | AA | Lithium | no | no | 3000 | \$2.87 | \$95.75 | | | \$95.75 | |
| | | | | | | | | | | | \$0.00 | |
| Bearwobble | AccuEvolution | C | NiMH | YES | YES | 4500 | \$9.98 | \$0.07 | \$0.015 | \$0.100 | \$0.19 | 248% |
| WalMart | Energizer * | C | NiMH | yes | no | 2500 | \$4.44 | \$0.06 | \$0.015 | \$0.100 | \$0.17 | |
| Radio Shack | Radio Shack | C | NiMH | yes | no | 3000 | \$8.50 | \$0.09 | \$0.015 | \$0.100 | \$0.21 | |
| Radio Shack | Radio Shack | C | Alkaline | no | no | 2000 | \$0.94 | \$46.81 | | | \$46.81 | |
| | | | | | | | | | Batteries rated at 1.4v; 100 amp hours = 0.14 kwh | | \$0.00 | |
| Bearwobble | AccuEvolution | D | NiMH | YES | YES | 10000 | \$9.98 | \$0.03 | \$0.015 | \$0.100 | \$0.15 | 316% |
| Radio Shack | Radio Shack | D | NiMH | yes | no | 4500 | \$9.35 | \$0.07 | \$0.015 | \$0.100 | \$0.18 | |
| WalMart | Energizer * | D | NiMH | yes | no | 2500 | \$5.44 | \$0.07 | \$0.015 | \$0.100 | \$0.19 | |
| Radio Shack | Radio Shack | D | Alkaline | no | no | 2000 | \$0.94 | \$46.81 | | | \$46.81 | |
| | | | | | | | | | Batteries rated at 1.4v; 100 amp hours = 0.14 kwh | | \$0.00 | |

* The size C and D Rechargeable/Low Self Discharge battery sold by Energizer and others is actually one AA battery placed inside a C or D shell. Not nice!

WHAT THE NUMBERS MEAN:

Actual battery cost per 100, 000 mAh = Purchase price of battery / (battery capacity MULTIPLIED BY the number of depletion cycles of battery).

Capacity used is that provided by manufacturer in mAh (Milli Amp Hours).

Alkaline and Lithium non-rechargeables shown have just 1 depletion cycle.

All NiMH rechargeables shown are estimated to have about 3000 depletion cycles (may be recharged about 3000 times).

RECHARGEABLE BATTERY CHEMISTRY -

Lithium Ion rechargeables (pricy): Used mainly in high drain electronic devices and the custom shape industry. Not offered sizes above or included in this analysis.

NiMH rechargeable batteries have replaced the wimpy, highly toxic NiCd rechargeables of the 90s. NiCd's are illegal in some areas, but are still sold.. Don't buy them.

There are two types of **NiMH (Nickel Metal Hydride) batteries** - **LSDs** and **non-LSDs**.

Most have the power and capacity for high drain devices, may be recharged MANY times, and are eco-friendly.

* **Non-LSDs: These are sold uncharged, and lose their charge quickly while idle** (at least 20% per month) - unacceptable for emergency, other readiness needs.

* **LSD (Low Self Discharge):** Come fully charged, hold charge while idle (loss < 2% per month). This is essential for emergency, other needs. If it isn't labeled LSD, it's not.

THROWAWAY BATTERY CHEMISTRY -

* Alkalines offer good power, good capacity and hold their charge. However, the **relatively low cost per battery is deceiving**. As shown in the above chart, the **actual cost per mAh** of a AA alkaline is over 1300 times as much as some AA NiMH rechargeables.

* Lithiums offer good capacity and hold their charge well. A few high drain devices absolutely require the extra power of a lithium, but NiMHs and alkalines usually work just fine. These batteries are pricy any way you slice it - especially when you figure out what you are paying for each mAh - which is **642 times more than for a 9v NiMH!**

The battery specifications used in this analysis were gathered with due diligence, but subject to unintended error.