

How “Bad” Can a Battery Be?

This is the title of an article in the June issue of Sport Aviation, the magazine of the Experimental Aircraft Association. The author, Robert Nucholls went on a scavenger hunt through several stores and purchased the following AA cell batteries:

Duracell “Ultra” at 80¢ per cell

Energizer e2 Titanium at 75¢ per cell

Panasonic at 38¢ per cell

Eveready at 38¢ per cell

Dollar General Energy Super+ at 25¢ per cell

He built a “battery killer” to hold 8 AA cells and connected 5-ohm resistors across each cell, and plugged the device into a computer driven data acquisition module. He discharged several sets of all brands down to 0.85volts and recorded the time in hours and recorded watt-hours energy. The Duracell Ultras lasted the longest, followed by Eveready, Dollar General, Panasonic and Energizer, in that order. In terms of watt-hours energy, Duracell lead, followed by Panasonic, Dollar General, Eveready and Energizer in that order. Except for Duracell, which produced 2.36 watt-hours of energy, the others demonstrated very little difference, ranging from 1.99 to 2.09 watt hours. In terms of cost per watt-hour, Dollar General was by far the cheapest at 12¢, followed by Panasonic, Eveready, Duracell, then Energizer at 37¢ per watt-hour. He concluded that every battery in the test would power a light bulb for about the same interval, although Energizer and Eveready will deliver fewer total lumen-seconds of light over their discharge cycle.