

E-bike battery information for the C&NW CTC Triennial Vets 100 route 2019

Brian L is a regular rider with C&NW CTC groups; in recent years he has also gained considerable experience with riding e-bikes. He has kindly produced this report on battery usage from a test ride on the course:

I rode the vets 100 course by e bike on 17th May to ensure that if I rode it in the event proper I would not be embarrassed by running out of power and I thought you might be interested in a few statistics.

My approach was to use up one battery sparingly in "Eco" and see how many miles I could get and then use the second battery in "Touring" (next higher setting) I occasionally used "Sport" (the third highest setting) on a few short climbs. I did not use "Turbo" the highest setting, at all.

Battery 1 gave me the following distances (in miles) for each bar: 1) 15 2) 17 3) 14 4) 11 5) 10 a reduction in output per bar as the battery discharged*. After the first two bars, I thought I was heading for about 75miles but that was wishful thinking. Total of 67 miles flattened it with still 33 miles to ride. I would suggest that one 500 Wathour battery is not enough for a comfortable ride.

When I went to the second battery, I got 1) 13 2) 14 and lastly 6 which I would guess as half a bar. Just for comparison, the terrain for battery 1 was 28ft per mile and battery 2, slightly more at 30ft per mile which I don't think is very significant.

The wind varied but was light generally. Heavy windy conditions would have made the power consumption seem worse of course.

These batteries are now 18 months old and have done 3300 miles between them including some hilly routes.

My batteries are both 500 Watt hours and I think it clearly demonstrates that one such battery is not enough for this event for a comfortable ride and maintaining a reasonable group speed.

Moving average speed for Battery 1 was 12.4mph and for battery 2 when I knew I had plenty of spare power was 13.5.

I was very comfortable throughout the ride and with the hindsight of this ride I could probably have put more of my own effort into it, should I have wished to and got further than I did on Battery 1.

*For the uninitiated the number of "bars" shown on the display (a sort of histogram), relates to the battery condition. An unused battery shows 5 bars and a flat battery shows none.

Many thanks to Brian for the comprehensive and detailed report.