

INSIDE THIS ISSUE:

Quit Smoking! Kick the Petroleum Habit

Many of us just can't see past the era of the petrol automobile, but fortunately some can. I am sure when we look back on this era, we are going to shake our heads in disbelief. Today, our transportation system is so dirty and wasteful in that even in our children's lifetime we will wonder how we allowed such waste. Our cities have such unhealthy air, the precious resource of fossil fuels is being squandered, and our health is heavily compromised, all for lack of adoption of cleaner, healthier and more thrifty transportation options available to us now.



Of course my favorite example of a winning technology that answers our average transport needs is the electric bike. I use this example because of its extreme thriftiness while doing the same chores as well or better than the conventional car. Electric bikes offer us transport and light to moderate hauling at an energy usage of approximately a 50th of a conventional automobile and for about 100th of the fuel costs. We could see more of these adopted by those who wish to save money and who are environmentally aware.

At last now we have achieved excellent electric vehicle technology, like my favorite electric bikes, that could go a long way towards clearing the air and saving irreplaceable resources. What may surprise the rider of the electric bike is the lifestyle improvements that Ebikes offer that are not possible with a conventional car. The lack of traffic gridlock; the lack of engine idling; the ability to make frequent stops without parking issues; and the ability to talk with people you come upon along the way. In most cases the significant operational savings associated with electric bike usage, allows the owner to work less, to feel more economically secure and stay a bit healthier all at the same time. It's a remarkable transformation for many, and just a bonus in addition to the reasons that motivated them to purchase the electric bike in the first place.

While new electric transportation options promise efficiency and energy cost savings, they are hard to bring to market without the right political will because they usually cost more initially to

purchase. Some countries have made the investments necessary to move towards our new energy future, and we can only hope thereby avoiding the problems we foresee with resource depletion and climate change. We too need to be willing to make the changes in our transportation needs such as adopting hybrid cars and/or electric bikes.

Seldom is there a lifestyle change that we so clearly need to make for ourselves and for the environment which will also save us money at the same time. I submit to you that riding an electric bike has a remarkable list of benefits that you should seriously consider. It could be a win-win solution for you and the environment. It might even make you better looking.

Ebike distance	2
Editorial opinion	2
NZ ebike news	3
Articles invitation	4

Did you know?

One out of four bikes sold in the Netherlands is an ebike. That's a heap of bikes!

SPECIAL POINTS OF INTEREST:

- *Cold Weather and your Battery*
- *Retired riders flatten steepest streets in NZ.*
- *Cargo ebikes on way to NZ marketplace.*
- *The Future of Batteries.*

Do Ebikes Go as Far as the Vendors Say They Will?

Jace Hobbs

If you are looking into electric bikes, you will hear a lot of claims about the range of pedal assisted bikes. It seems that each supplier is claiming that their bike will go further and further. Isn't there some sort of real comparison that you can make?

The surprising truth is that similar brushless hub motors of a certain wattage will go just about exactly the same distance on the same battery charge. If you put so many amp hours of battery power to work on a series of different brands of motors, the lack of variation will surprise you.

The distance variation can be due to speed. The faster you go the more energy will be eaten up in acceleration and in overcoming wind resistance. Cool weather also can limit the range. Hills of course can drink lots of battery power while grinding up a slope. Even the weight of the rider and the load can make a difference. Added together, you get your unique range of travel out of your battery and it is simple physics.

What most vendors can't tell you is how much pedaling you may want to invest in the bike's travel. If you did almost all the power input from your pedals, you

could go a thousand kilometres on a battery charge. In other words, are you getting an ebike to use as an ebike or are you going to pedal push it everywhere? The claims become nonsense and you should treat them as such.

The important variable that you should look for is the quality of the motor, controller and the battery. These range in quality and the only way you can be sure of getting a long and satisfying use out of your ebike is to go with the

brands that have been tested in the destruction test labs of Justin Leverne or a similar independent testing lab. You will find from his work in taking each brand of motor to its limits that they are not even remotely made to the same quality. Some brands are junk, made to be cheap and disposable, and would be a very unreliable purchase.

Other ebike brands are precision built with a high degree of durability and quality control. They are built by man-



eZee Forza : Fully loaded in the Pyrenees

ufacturers who offer a warranty and expect to honor any defective units at great cost to themselves. These products will all have a brand name that is intended will build a reputation and companies will guard that name with stringent quality control. For my money, this is the only kind of ebike to own, reliable service is the way to make an ebike affordable. If you have to repair it, you want that work to be under

warranty. You will pay extra for the quality and security up front at the time of purchase, but it will pay off handsomely when you are riding that bike 12 years down the line.

If you are the kind of person who buys the discount appliances that are impossibly cheap, and you carry that purchasing behavior into the

ownership of an electric bike, you may be disappointed. How many ads will you find for second hand ebikes that have hardly been ridden? Why on earth would they not be ridden? It's usually because they are not a pleasure to ride and/or have broken, been fixed hurriedly and are sold again to the next poor soul. This gives ebikes a bad name that they don't deserve.

Electric bikes can be great, but they must be built great. My company has acquired the rights to eZee New Zealand because eZee has been tested in Mr Leverne's labs in Canada. Time itself has also shown that these bikes are strong, tough and efficient. They carry the best guarantee in the industry for the reason that they are so reliable. The choice is yours.



"The most important variable that you should look for is the quality of the motor, controller, and battery."

In the Ebike news

Peter Grant, 69, was interviewed by a Wanganui Newspaper recently as he rode his eZee Sprint up the long grade to the new part of town, high on a bluff, that has limited the non-automobile commuting in his hometown. You won't see many bikes grinding away up that slope today but you may see more in the future as Ebikes take hold and people realize they can depend on them to navigate the tiresome parts of the ride and get them to the shopping and home with little sweat and less stress. Peter that same day had taken his Sprint up the longest hill in another area and described the riding as "easy". You can read the particulars in the weblink below.

<http://www.wanganuichronicle.co.nz/local/news/electric-bike-makes-easy-work-of-tough-hills/3955566/>

Graham Snadden demonstrated the remarkable hill climbing ability of the electric bike by climbing Russell street to the top of the port hills in Nelson. This street is thought to be the longest steepest in the area and the port hills the highest point of high density housing. The point of the exercise is to show that even a 71 year old with one arm raised and waiving can commute on the 21st century answer to the climate and petrol crisis, in this case an unmodified eZee Quando folding bike. The answer could be right there under our noses, the electric bike. See the article at

<http://www.electricbikehub.co.nz/wp-content/uploads/2011/06/nelson-steep-street.pdf>

Production electric cargo bike to come to NZ marketplace.

The Yuba cargo bike company has given eZee the task of producing the first production electric cargo bike to be marketed in the west. The result is perhaps a giant step in the direction of sustainable technology, traffic abatement and one sweet riding ebike. Companies and individuals with the right tasks that can benefit from this cheap to operate machine are already lining up. One surprising application is service calls in the downtown areas of our cities. One company figures that their repair techs spend so much time in traffic and finding parking that the service bike will save them heaps and pay for itself in short order. The new Yuba is on the www.electricbikehub.co.nz website.

How does cold weather affect your ebike lifestyle?

One of the sad realities in life besides death and taxes is the performance degradation of batteries in cold weather.

Check with battery salespeople about cold weather and you will hear how they are busy with sales at the beginning of cold snaps. Winter brings a reduction in battery performance, but our lovely lithium batteries are the least affected and still quite powerful

What can you do? Well, winter can be handled with covering your helmet with a helmet cover and wearing a windproof fleece liner under it. The battery issue is not so simple. You will have reduced range and performance with any given sized battery. You can own a second battery or get the larger 14 amp.hr. unit for your main slid-in pack. These 14's are 40 % larger than the standard batteries and will be a remarkable increase in range and slightly better at hill climbing as well.

One of the things that is little under-

"Winter brings a reduction in battery performance, but our lovely lithium batteries are the least affected and still quite powerful"

stood about batteries is the larger capacity ones will have a longer lifespan. The loading and charging is significantly reduced so that the economy of the extra up-front cost is quite good. If you can afford the larger battery at the time you purchase your bike, you will get lots of extra life out

of it. My estimation is more than a year longer. In the long run, the lithium battery in the larger capacities is a better value than the average sized ones. Go large.

Perhaps the only compensating thing about cold weather is the good feeling getting out and building some body heat with good old fashioned exercise. Your hybrid bike is a great way to do that, while getting you very low cost transportation at the same time. It will be hot soon enough - keep biking.

If you don't use your bike in winter for any reason, you need to remember to charge your battery for one hour every 10 weeks. Just a small top up will preserve its life quite well. They don't like to sit around unexercised and neither should you.



EZOOMERS NZ
NEWS AND VIEWS
ON EBIKES

Jace Hobbs , Editor

Electric Bike Hub
76 Man Rd. Wakapuaka
Nelson, 7071

Phone: 03-545-1122
Fax: 03-545-1015

E-mail: jace@electricbikehub.co.nz

Please pass this newsletter on to anyone that
that would like to get it.
To include or exclude yourself from the next issue,
just email us with your wish.

*Your next bike could
be an ebike*



*We encourage submissions about Ebikes and issues surrounding Ebikes for publication
in subsequent issues of EZoomers. Simply drop an email to Jace Hobbs at the return
address and your ideas or article may well find its way to the many that want opinion
and information about Ebikes in NZ.*

The Life Altering Technology of Lithium Polymer Batteries Powering Electric Bikes

The lithium batteries that we use in ebikes are a 21st century transportation marvel. Don't think for a minute, however, that one lithium battery is like another. The quality of the cells and the assembly of those cells is critical to the satisfactory use you can achieve from a large storage battery like the ones eZee and other brands currently use.

Whatever you have thought about batteries in the past, put that aside as you experience a new Lithium battery

with your new electric bike.

Where we started

In the past, batteries had memory issues, meaning that small charges diminished their ability to hold a charge. That is truly a thing of the past.

Batteries used to be too heavy and cumbersome to carry into the home or office to charge. That too is a thing of the past.

Once, batteries ran out in a descending power curve. This meant that when the battery was half used, it was half as powerful as when fully charged. The full useful potential of the battery was never achieved as the last electric power out of it was so anemic as to be just about useless.

In the past, Ebikes had connectivity problems making them unreliable in wet weather and unreliable for commuters that needed a hassle-free transportation choice. The batteries had complex maintenance requirements and there were lots of failures and poor performance. With today's better brands of Ebikes, those problems are in the past, however there are plenty of poor quality Ebikes that will frustrate and fail you, making their purchase a foolish investment.

Where we are today.

Whatever you remember about taking care of your rechargeable batteries in the past, today there is a very simple formula for getting maximum utility out of your ebike battery. It's this simple: plug it in as often as you use it, and keep it fully charged for best longevity. Preferably, charge it every day at the end of your ride.

Your lithium battery is a remarkable piece of technology. It will take you quite far, and it will take you with nearly full power until it is completely depleted. Operationally, it works like a gas tank and provides nearly full power until empty of a charge. When it is nearly depleted, the power will fall off rapidly, and your bike will be just a push bike again. The good news for us is how far you got on so little electricity.

The future of batteries.

There will no doubt be much better batteries at some point, and makers of electric bikes will be at the forefront of that progress, but you have a remarkably good battery right there on your bike today. The economy and the ecological rightness is already there on a quality ebike for you now. What will you do with it?