

## What do e-bikes really cost?

I am often asked about the cost of batteries and the projected lifespan of the eZee lithium series batteries that we sell. The way to calculate this most effectively is the cost per kilometer.

Right now, the replacement cost of a 14amphr. lithium battery with full 2 year guarantee is hovering around \$1000 including GST. That cost is likely to go down in the next ten years, so let's use it as a worst case for considerations about the costs inherent in the battery. The lifespan of this battery is estimated to be about 5 years of average use. (none have died of old age yet).

A simple calculation shows that you will spend about \$200 dollars a year for the benefit of the battery. The first point about this is that your e-bike is offsetting car expenses that are much greater. Here's how.

Since charging the battery only costs about 12 cents in electricity (from empty) you could say that your 'fuel' cost for the year, (battery +electricity) is would be under \$225. If all of that battery power were converted to hybrid e-bike kilometers, your cost would calculate to just about 5 cents per kilometer.

The IRD calculates that it takes a small car 74 cents per kilometer to run and you can deduct this amount as an expense for driving. The comparison is easy from there; it costs you about 1/15 of the cost of a small car to ride your e-bike. For every trip you take in your car, you could cover that distance 15 times for the same cost. So if you can get rid of a second car, or even your one car, your expenses would plummet. Of course there are health benefits for biking, but we won't count those.

It's clear that every time you use your e-bike and commute to work, you have saved enough to buy yourself a very good lunch, or add to your retirement fund. These savings really add up. You can purchase an eZee with the savings of avoided car expenses. Financing may make sense with stats like this. Does this make dollars and sense for you?



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### Did you know?

20 bikes can be parked in the space of one car and e-bike commutes can be quicker because door to door travel is so much more direct.

### Did you know?

An MIT study in Lyon France found that bikes are 50% faster than cars during rush hour. E-bikes commute at faster speeds than push bikes. How much faster would that make them?

### APRIL/MAY SALE

BUY ANY EZEE BIKE AND RECEIVE A FREE PANNIER BAG SET AND RIGHT HAND MIRROR.

SEE EZEE DEALERS

## **Auckland reinvents itself as a sustainable city.**

### **Auckland EV advisory Committee**

I have been approached about serving on an advisory committee for dealing with the long term sustainable transport option of electric transportation in Auckland. It's a big assignment as the scale of the transition requires us to sharpen our pencils on many different studies and considerations that are available today. I look forward to my role on this panel, and my preliminary research confirms that the simplest component of motorized zero-emission transport is the electric bike. Electric bikes transport a driver for about 1/40<sup>th</sup> of the energy that it takes to run an electric car, and no infrastructure has to change to adapt to their use. Your eZee bike is a remarkable part of the energy and transportation remedy that our cities and our economy needs; as a country and as a planet. There is a bright future for electric .

There is a growing imagining of Auckland with a new transportation model that does not leave large numbers stranded in traffic jams, does not cause respiratory distress to its populace, does not pollute

near shore waters with toxic petrochemical runoff from the streets, and does not squander millions per day for petroleum from countries that are not even democratic.

The new Auckland will be powered off the clean energy produced nearby, be made congestion free by smart traffic monitoring, be safe to bike and breathe in, will have pristine bays and beaches, and will be all the richer and more secure for it because all that investment will stay at home, circulating in our own economy.

The new Auckland will join the growing list of cities that have reinvented themselves into vibrant, livable, desirable urban landscapes to inhabit.

### **Councils and fleet operators are buying eZee products.**

Hamilton Council has picked the eZee Street and Cadence for their new e-bike fleet. eZee has won each competitive bid that it has entered into with industry and government and you have to wonder why. eZee products are not the cheapest so there must be something else that fleet operators are looking for when

they pick the eZee after trialing many different brands. I will leave it to you to see why it is that the experts choose eZee for fleet operations. I know why they choose eZee, but I have said that all before.

Another major private fleet operator has put the eZee Street into a pilot programme and will determine the expansion of this e-bike initiative upon statistical analysis. There are two factors that helped fleet operators to reconsider the use of e-bike; expense and performance. First, traditional autos are exceedingly wasteful and expensive to operate in the start and stop conditions of fleet use. Secondly, we now stock an eZee 20 amphr. battery, which promises to carry a commercial operator all day without a battery top-up. This increases the productivity of their staff and gives greater payback from an e-bike purchase. This all-day operation is a watershed event. The necessity of multiple batteries or multiple chargers has been eliminated for most commercial riders and this will make the uptake of e-bikes into commerce much more attractive. The other factor is the new hi-torque motor means that steeper hills can be flattened and more terrain included in the routes.

## EZee news around New Zealand

**Mayor Celia Wade Brown** now owns an eZee Torq. It has been an honor and pleasure to be chosen to provide the very charismatic mayor with a zero emission e-bike. She will use the bike for her commuting and mayoral duties around Wellington. This exemplifies the leadership she has brought to sustainable transportation. She was gracious enough last year to ride our cargo bike across Wellington and this year she had a different motivation for now using an electric bike.

In my conversations with Celia, it is my impression that she senses her public example of lifestyle, and wants to demonstrate the easy uptake of zero-emission vehicles. As much as I like seeing her on an eZee, becoming friends with Celia and having some personal conversations with her has been a highlight of my time in this business.

I happen to champion her world views and ambitions for Wellington.



### **More Torque for eZee motors in 2012**

The big news from eZee is something that you cannot see: more torque! The newest motors we now shipping in have been engineered with more permanent magnets crammed into the hub-motor and the resulting power on the hills has increased dramatically. Our older bikes had great acceleration and hill climbing, but the new motors are that much more able and powerful. Still, the very sophisticated eZee controller does a remarkable job of translating your input from throttle and pedals to the motor, so the extra power is available but not intrusive. The smiles that have appeared on my customers faces is satisfying and instructive. eZee is on the right track with its development.

**The Street** is our newest model and it has catapulted to our most popular model. It has appeal for the young and old, and the reason may surprise you. The young like the Rally 20 type styling and the old like the stand-over ease and the step-thru frame. They both like the peppy nature of the Street and it is a sterling performer. See our video of eZee an rider over 70 yrs going up the steepest street in Nelson on our website. The Street is a remarkable ride from a remarkable company and has become our most popular bike.

### **New Urban Biking Study for Urban NZ Cities**

Professor Alistair Woodward, Head of Population Health Univ. of Auckland, has published a study on bike use in urban areas. Interestingly, 3/4 of car trips are less than 7 kilometers.

The upshot of the study is that if only 5% of urban car trips were switched to bike, there would be  
-120 fewer deaths from heart disease, diabetes, and stroke and cancer.

-20 million liters of petrol saved.

-significant mental health benefits.

With this enormous uptake of cycling, an increase of only 4-5 deaths from collisions would result. ( far fewer than the car travel it replaces. )

There are many other points from the study that you will find interesting. The full report can be read at <http://sustainablecities.org.nz/2010/05/prof-alistair-woodward-%E2%80%93-put-me-back-on-my-bike/>

EZOOMERS NZ  
NEWS AND VIEWS  
ON ELECTRIC BIKES

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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 e-bike*



*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 who want opinion and information about Ebikes in NZ.*

## E-bike Celebrity News

Wai Won Ching, visionary e-bike developer and the president of eZee Kinetic Technology paid a visit to New Zealand last month. Hi wife Bonnie and their 7 year old daughter joined him as they toured parts of New Zealand and visited eZee dealers along the way. Norea refreshed my memory of the joys of having kids.

Wai Won is a fount of information, a broadly read and researched advocate of sustainable business and transportation. He gave a presentation at the NZ Energy Centre in Taupo. His analysis of NZ and world transportation options is all about efficiencies and resources. In short, his statistics show we can have a vibrant and accommodating future if we downsize our vehicles and use more mass transit. He shows that the full size car, in its present configuration, will not make a practical transition to electric efficiency because of cost and infrastructure requirements but buses, mass transit and smaller vehicles will be very desirable. Perhaps that conclusion is not so novel but his expert analysis of battery and electrical loads

makes it an important summary of our future transportation options.

We were able to help the Ching family go camping and also visit nearby natural parks. While very well traveled, they seemed to enjoy the simple surroundings of our home in Nelson and the national eZee distribution centre I have built here.

A highlight for me was the training and installation of our new digital battery load testing device. It will take any battery and put a known load on it for a duration that shows its viable capacity. This is important for our warranty work and for a variety of certification issues. I got heaps of technical advice as well.

New Zealand weather was pretty bad, and more relaxed sightseeing will have to wait for their next NZ tour, as storms lashed the country for much of their visit.

For me, the Ching family visit was a chance to connect with a prime mover in the e-bike development field, and to enjoy a personal side of the business that I am fully committed to. It was a pleasure to share our Nelson lifestyle and surroundings with a lovely family that I have only known through international commerce until now.