

Market Trend and Regulation of E-Scooter and E-Bike in North America

Ed Benjamin

www.CycleElectric.com

CycleElectric International Consulting Group USA

- **We study markets, product, and distribution in order to learn how to succeed in the light electric vehicle business.**
- **Ed Benjamin is the President of CycleElectric, and the President of the Electric Cycle Association of the USA.**

Light Electric Vehicles

- This includes
Electric Bicycles
and Light Electric
Scooters



CycleElectric Predictions

- **CycleElectric believes that the eventual size of the electric bicycle market in the USA will be about 1.5 million pieces per year.**
- **CycleElectric believes that the eventual size of the light electric scooter market will become about 15 million pieces per year.**

1.5 Million Light Scooters in USA for 2003?

- **Inexpensive scooters from Zhejiang, Shenzhen and Shanghai are the dominant products in the USA market. Most retail for less than 250 US. Most cost less than 100 US FOB China.**
- **Most have quality problems, but quality is getting better with every shipment.**

Electric Bicycle Sales in USA

- **Volume is small**
- **Most major bicycle companies experimented with low power (250 watt) electric bikes in late 90's and failed.**
- **Consumers were disappointed with product. Companies were disappointed with sales.**

What Americans Want

- **After nearly 10 years of trying to sell light electric vehicles to the USA, it appears that the USA market demands simple, low cost vehicles that are powerful enough to carry the larger American Consumers short distances and up small hills.**
- **These vehicles must be easy to service, and reliable.**

Prices

- **Electric bicycles need to retail in the USA for less than 600 US.**
- **Electric Scooters need to retail for less than 300 US.**
- **In a couple of years, higher priced, feature rich products with better performance will start to gain market share.**

Electric Bicycle Regulations for USA

- **HR727 signed into law in late 2002 defines an ebike or “power on demand” bicycle equipped with a motor of less than 750 watts, a top assisted speed of less than 20 mph and functional pedals as a “bicycle”.**
- **No need for driver’s license, no registration, no insurance, no helmet (in most states) and access to all roadways and bike paths. Must conform to CPSC (Consumer Product Safety Commission) requirements for bicycles and assigns responsibility for electric bikes to CPSC rather than DOT (Department of Transportation).**

Government Encouragement

USA Central Government encourages or discourages business activity with laws and taxes that help or hurt a business or product.

- **The Electric Bicycle law is a strong encouragement.**
- **Most electric vehicles are tax free or have tax rebates in the USA – another encouragement.**
- **State and local laws tend to encourage electric bikes.**
- **State and local laws tend to discourage small gasoline scooters – and this can affect small electric scooters in some cases.**

Ebike vs. Pedelec

- **The law allows an ebike (power on demand) control paradigm. Same as China.**
- **The law also allows a pedelec (power assistance to pedaling) paradigm.**
- **Pedelecs enjoy no more advantages in the law than ebikes.**

Electric Motorcycles

- **Powered two wheelers that have larger motors, higher speeds or no pedals are allowed – as motorcycles.**
- **Such motorcycles must meet the DOT requirements for motorcycles in the USA.**
- **Helmet, registration, operator's license, insurance are normally required.**

More regulations coming from Government Agency CPSC

- **The CPSC is in the process of developing “implementing regulations” that will specify many details of electric bicycle requirements.**
- **These additional regulations will address safety issues. Brakes, lights, reflectors, motor power measurement criteria, and similar issues will be addressed.**
- **No date on the announcement of these regulations.**

Today's Electric Bikes in USA

- **Various Importers of Chinese Electric Bikes. Some well organized with significant resources such as IES.**
- **Giant**
- **EV Global**
- **Panasonic**
- **Currie**
- **Ideation**
- **Sharper Image**
- **Pacific Cycle**
- **Zap**
- **Prima**

Technical and Cost Challenges

- **750 watts requires an expensive motor and a large battery. Costs go up in several areas.**
- **USA consumers demand long range, but do not ride their bikes very far. Stated range is an issue, actual range is not an issue.**
- **USA consumers are being taught by the scooter industry that electric vehicles should be very low priced. This hurts margins.**
- **Service on electric bikes is hard to obtain. This makes consumers reluctant to buy.**

American Consumer

- **Focus groups indicate that the USA consumer wants an ebike, with moped like performance.**
- **More power is better.**
- **Climb hills**
- **No service or reliability problems**
- **Low price**
- **Attractive appearance**

Channels of Distribution for Electric Bicycles

- **Bicycle Shops**
- **Catalog Merchants**
- **Internet**
- **Electric Vehicle Specialists**
- **Direct to Consumer**
- **Mass Merchants**
- **Sporting Goods Stores**
- **Power Sports Retailers**

How To Reach These Channels

- **Small, independent retailers usually buy from large established brand name distributors. Occasionally from small importers.**
- **Major retailers usually buy from well established American Brand Names, or direct from Chinese factory.**
- **Brand Names usually buy direct from factory.**

No Real Marketing Yet

- **American Consumers are responsive to advertising.**
- **None of the electric bicycle or Scooter Companies have created significant advertising campaigns.**
- **Only limited Public Relations campaigns have been used.**
- **The first company to use real advertising will enjoy much better sales.**

Availability of Service and Repairs

- **Bicycle Shops**
- **800 service lines – USA is too large for local service for most products.**
- **LEVT is the only service specialist in USA.**
- **Refunds and returns are way the mass merchant handles service and repair.**
- **Parts are in limited supply.**

Use of Electric Bikes in USA

- **Retired couples riding around local area for relaxation.**
- **Commuting in major urban areas**
- **Toys**

Future Use of Electric Bikes

- **Commuting**
- **Exercise (Pedelecs)**
- **Recreation**
- **Toys**

Issues In The Future

- **How to measure motor power**
- **Push to start?**
- **Product Liability**
- **Age Limits**
- **How much power?**
- **How much range?**
- **After Sales Service Network.**

Regulations Concerning Electric Scooters in USA

- **No Federal or nation wide law. Each state has a different definition and different laws. Some favorable, some not favorable.**
- **Wide variations in requirements is the result.**
- **Difficult to conform to so many different laws.**

Lack of Consistent Law a Danger to Scooter Makers and Importers

- **“Illegal” scooters make for semi-automatic product liability judgments against makers and retailers.**
- **No way to know how to equip scooter and what standards to meet.**
- **Major retailers, insurance companies, and distributors wary of legal problems of scooters.**

Gasoline Scooters Create Additional Problems

- **Numerous injuries on gasoline powered scooters, combined with obnoxious noise and irresponsible use by teenage riders creating negative reactions among communities, police, and law makers.**
- **Bans and restrictions on gasoline scooters – becoming more common – often include electric scooters by mistake.**
- **CEI predicts nationwide prohibition of gasoline scooters – with possible inclusion of electric.**

Numerous Injuries Occurring on Electric Scooters

- **Hundreds of injuries have occurred in the USA in the last few months.**
- **Common scenario is a very young rider who rides an inexpensive scooter into traffic. With no knowledge of traffic rules and very hard for car drivers to see – children are being struck by cars.**
- **This will result in legal restrictions and lawsuits.**

A Federal Law is Needed

- **An effort should be mounted by the electric scooter industry to create a rational set of laws for electric scooters on a national level.**
- **A lobbyist should be hired.**
- **2-3 years and 100-150,000 US dollars are needed.**

Scooter Companies Must Lobby for Appropriate Laws

- **A coalition of Scooter Companies who promote reasonable regulations for Electric Scooters and are willing to pay a lobbyist to work on creating a new federal law for scooters is necessary.**
- **Such a law should create standards of safety that will also become barriers to the cheapest products.**

Channels of Distribution

- **Mass Merchants**
- **Big Box Sporting Goods**
- **Internet**
- **Catalog Merchants**
- **Independent Retailers**
- **Flea Markets**
- **Bicycle Shops**
- **Motor Sports Retailers**
- **Special Event Truck Vendors**
- **RV Dealers**
- **Golf Cart Retailers**
- **Truck Vendors**

Quality

Quality is a word that means different things to different people. For the USA electric vehicle consumer it means:

- **Works and looks perfect when it comes out of the box and continues to look and work perfectly**
- **Easy to assemble, easy to use, never a breakdown, no flat tires, looks good, and is quiet. When it does break, it is easily and quickly repaired by a local service center.**

Warranty

- **Most USA Consumers expect at least a one year warranty. And they expect easily available service under that warranty.**
- **The Bicycle Industry and others offer much longer warranties – leading some retailers to expect much better warranties.**
- **Separating the battery warranty from the vehicle warranty is not well understood or received by the consumer and dealer.**

USA Consumers and Returns

- **When a USA consumer is not happy with a product – no matter what the reason, they will go to the retailer and demand a refund of the money.**
- **USA law does not require the retailer to refund the money – but customary practice is to give the consumer their money back.**
- **No questions or criteria are applied to the consumer – if they want a refund, they can have it.**
- **Because of this, the products must be very good when they come out of the box. The product must be “Idiot – Proof”. And no matter how good, at least 2% will be returned for no particular reason.**

Major Retailers and Returns

- **When a major retailer in the USA has product returned they will usually charge the supplier for the cost of the product, the margin that the retailer would have earned if the product stayed sold, and a fee for handling the return. If the supplier wants the product back – there is likely to be an additional fee.**
- **Many scooter suppliers have been forced to leave the business, change their address and turn off their phones as a result of returns.**

Product Liability

- **When American Consumers believe that a product is unsafe or that they have been injured by a product – they sue the retailer, the distributor, and the maker of the product.**
- **There are, and will be more, lawsuits about electric scooters in the USA.**
- **Insurance Companies are becoming reluctant to insure electric scooter companies in the USA.**

New Channels of Distribution

- CycleElectric believes that specialist retailers will emerge to handle electric bicycles and scooters.



Book on Electric Bicycles and Scooters

- **Electric Bicycles World Wide Reports by Frank Jamerson PhD. Will be published this summer in English. This is 7th Edition.**
- **It is hoped that by fall, there will be a Chinese translation.**
- **This book reports on the current market and product situation world wide.**
- **For English copies, contact elecbike@aol.com**

Thank you