

# CHINAE VEHICLE

ELECTRIC VEHICLE INDUSTRIAL NEWS INSIDE & OUTSIDE OF CHINA

EXPECTING THE PROSPERITY  
OF TAIWAN'S  
EV INDUSTRY

CHINA CYCLE 2012  
REPORT  
- RECESSION IS  
STILL GOING ON

NUVINCI, WHERE IS  
YOUR NEXT STOP?

- INTERVIEW OF MR. ALAN NORDIN, PRESIDENT OF THE BICYCLE  
DIVISION OF FALLBROOK TECHNOLOGIES, MAKERS OF THE  
NUVINCI® TRANSMISSION FOR BICYCLES AND E-BIKES



SPECIALIZED  
TURBO

ISSN 1992-3961



Price: \$4.5

### REPORT:

TAIWAN GREEN ENDEAVORS OPEN NEW  
ERA IN MOTORING  
-EV TAIWAN 2012 STAGES TO BE THE EVENT OF  
TAIWAN'S INDUSTRY IN 2012

### ELECTRIC AMB

SPECIALIZED TURBO, THE  
WORLD'S FASTEST E-BIKE

### OBSERVATION:

OPPORTUNITIES FOR COOPERATION BETWEEN  
WESTERN AND CHINESE E-VEHICLE COMPANIES



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# AF7016A

**Electric System**  
Motor : 36V200W crank drive motor  
Battery : 36V10AH lithium battery  
Function : LED display, with 3 speed level  
Charger: AC100-240V, smart charger  
Charge time: 4-6 hours

**Performance**  
Frame : Alloy 6061  
Tire : 700\*38C  
Brake : Front & Rear V brake  
Gear : Shimano Tourney 7  
Dimension(packing): 141\*25\*91 cm  
Loading capacity(40HQ): 211 pcs

# AF7014

**Electric System**  
Motor : 36V250W F/D brushless geared motor  
Battery : 36V10AH lithium battery  
Function : LCD display, with 5 speed level  
Charger: AC100-240V, smart charger  
Charge time: 4-6 hours

**Performance**  
Frame : Alloy 6061  
Tire : 700\*38C  
Brake : Front V brake, rear roller brake  
Gear : Shimano Tourney 7  
Dimension(packing): 141\*25\*91 cm  
Loading capacity(40HQ): 211 pcs



# LILIUM

Dimension: 150\*65\*110cm  
Frame: Alloy (Folding)  
Motor: 24V 250W Brushless Geared  
Battery: 24V 8AH Integrated Li-ion  
Wheel Size: 20inch  
Derailleur: Shimano 6sp  
Shifter: Half Twist 6sp  
Max Speed: 26km/h  
Mileage: 30-40km  
Load Weight: 85kg  
Power Assist Mode: Pedal power  
Net Weight: 23kg  
Gross Weight: 25kg  
Charging Time: 5-6h  
Packing Carton Size: 90\*40\*86cm  
Loading Capacity: 260pcs 40HQ/101pcs 20FT



**jiajue**

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## A BIT THOUGHT AFTER THE BUSY APRIL

The past April is a busy month for CHINA E-VEHICLE. Our team attended Inabike (Jakarta, Indonesia), EV Taiwan (Taipei Taiwan), Canton Fair and China Cycle 2012, we are promoting China's EV industry and EV culture like non-stop. We travelled to a lot places during the past month and interviewed a lot people during the time. In most cases, there is one thing I always like to do, comparing the exhibitors from mainland and Taiwan, comparing their products and marketing strategy of the two places. The findings are very interesting.

China is the biggest e-bike and e-scooter consumer in the world and sold over 28million units last year. This is an incredible number for many countries. Normally speaking, the EV industry in China has been highly developed so far since it has going through such a long time. The truth is, the major exported products are still lingering at the low-level and low-profit stage, many people still hold the idea that the Chinese can only make the cheap quality stuff.

Taiwan's EV industry started much later than the mainland and people can barely see any e-bikes in the street, fuel-powered scooter is still first option for most people. But, the reputation of their e-bike and the components in the world is much better. At the opening ceremony of EV Taiwan, Mr. YC Chao, Executive President of Taiwan External Trade Development Council, said the quality of Taiwan's products was abreast with Japanese, which of course means sound quality and remarkable margin. In my opinion, they already find the proper way to promote their quality product across the world and already won the recognition of the buyers, even though they don't have that long history in EV's industry. The thing even more ironic is many of the Taiwan products are produced in China from the same company, but they can sell at a much better price and profit.

Fortunately, some Chinese already started to realize the graveness of this situation and attached the priority to the quality and reputation instead of pure quick money. You may know more about this after reading the "China Cycle 2012 Report" in this issue.

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## Fixer Products Basic Specifications

Size: 20"  
Frame: Aluminum Alloy  
Motor: BLDC GEARED Motor, 36V 250W  
Battery: 36V 10AH, Li-ion battery  
Gears: Shimano 6 speed  
Saddle: GEL cruiser saddle, or to order  
Charging Time: 4-5 hours  
Range: 50-60km  
Max Speed: 25km/h  
Max Load: 130kg



## EN15194 CERTIFICATE



**Roc** Products Basic Specifications  
Size: 26"  
Frame: Aluminum Alloy  
Motor: BLDC GEARED Motor, 36V, 250W  
Battery: Lithium, 36V 10AH  
Derailleur: Shimano 7 speed  
Saddle: GEL Cruiser saddle, or to order  
Charging Time: 4-5 hrs  
Range: 55-60km  
Top Speed: 28km/h, or to order  
Max Load: 150kg

## Birdy Products Basic Specifications

Size: 26"  
Frame: Aluminum Alloy  
Motor: BLDC GEARED Motor, 36V 250W  
Battery: 36V 10AH, Li-ion battery  
Gears: Shimano 7 speed  
Saddle: GEL cruiser saddle, or to order  
Charging Time: 4-5 hours  
Range: 50-60km  
Max Speed: 28km/h  
Max Load: 150kg



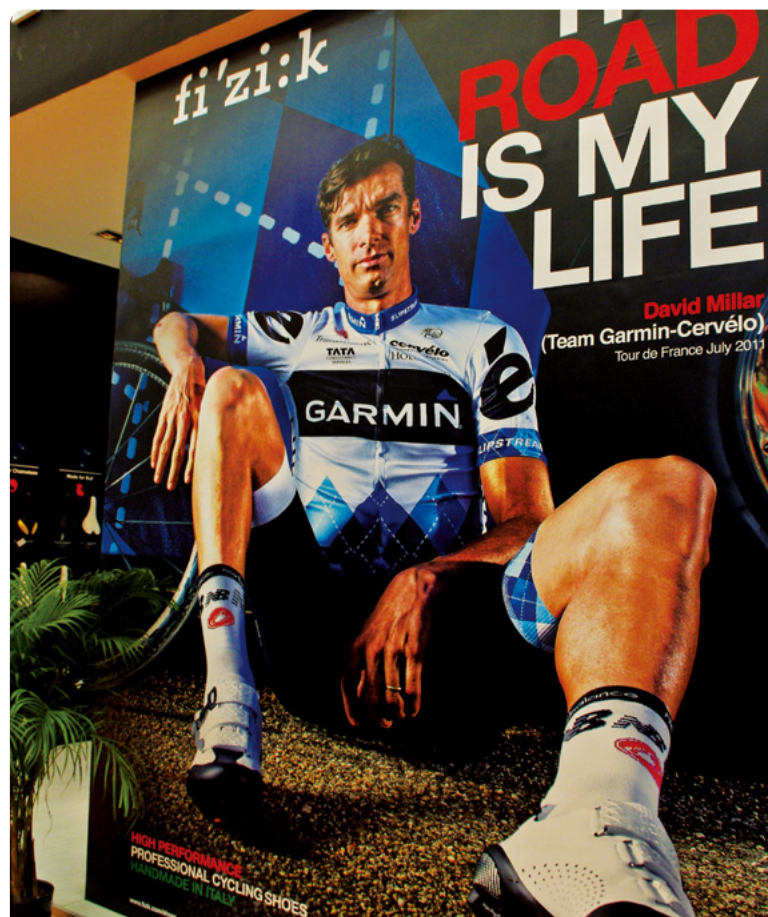
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**CEM-AEB19**

Motor type: 250w brushless hub motor,1:1PAS  
Max.speed: 25km/h  
Battery: 36V10AH Li-po  
Range per charge:40km  
Load capacity:100kgs  
Charging time: 4-6h  
Brake(F/R):Disk brake/V brake  
Tyre (F/R): 26"x1.75  
Speed gears:SHIMANO 6 speed gears



**CEM-AEB17**

Motor type: 250w brushless hub motor  
Max.speed: 25km/h  
Battery: 36V10AH Li-po  
Range per charge: 40 to 50km  
Load capacity: 100kg  
Charging time: 4 to 6 hours  
Brake(F/R):Disc/V  
Tyre (F/R): 26\*\*1.75  
Speed gears:SHIMANO6 speed gears

**CEM-ET04**

Motor type: 350w brushless hub motor,1:1PAS  
Max. speed: 20miles  
Battery: 48V/12Ah Li-po/SLA  
Range per charge: 45km  
Load capacity: 150kgs  
Charging time: 4-6h  
Brake(F/R): V/Expansion brake  
Tyre (F/R): 22"x2.15



**CEM-AEB22**

Motor: double 250w brushless hub motors  
Max.speed: 25km/h-30KM/H  
Battery: 36V10AH Li-po battery  
Range per charge:40km  
Load capacity:100kgs  
Charging time: 4-6h  
Brake(F/R):Disk brake/Disk brake  
Tyre(F/R): 20"x1.75  
Speed gears: SHIMANO 6 speed gears

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Optibike 1100R Review



- **48V1000W Motor / 48V1500W Motor**
- **48V30AH / 48V56AH LI-ION BATTERY**
- **25Km/h or 45Km/h**
- **Range: 60-75Km / 120-130km**

*With Lithium Battery E-Scooter, We Create New Future*

**Lithium Scooter**



**CHINA Patent  
EEC Approval**

PORTABLE Li-Ion battery Pack

A:48V 30AH



B:48V 56AH





### Leonardo Da Vinci-E-bike Project Team Meeting

Brussels, Belgium--Recently the consortium of the e-bike project team met in Brussels to discuss legislation, existing training material and competences profiles. This project is aimed at creating a framework for training on electric bicycles in the EU and is funded under the Leonardo da Vinci-program.

Next to ETRA, this project involves the training

institutes Innovam (Netherlands), Syntra West (Belgium), Vilniaus Jeruzales labour market training center (Lithuania) and CELF (Denmark), the Czech electric bike distributor ekolo.cz as well as Pro Work, a Dutch expertise and knowledge centre assisting low-skilled employees.

Following this meeting the next steps will be:

- Make a comparison between national and European legislation in order to identify potential gaps or overlaps between European legislation and its implementation in the member states.
- Develop a global competence profile for bike and e-bikes repairers and dealers.
- Explore on how to exchange existing training materials and methods and to develop a training plan matching the competence profile.

In the afternoon the project partners were invited to visit the Ecomobielsshop e-bike shop in Antwerp. A whole range of bicycles, electric bicycles and light electric vehicles were presented to the consortium, who took the opportunity to ask technical questions to the bicycle dealer who could also visit the workshop.

In parallel, the train-the-trainer sessions have started with a first two-day meeting in the Netherlands in February. The next session will take place in Denmark in June.

### Breakthrough in E-bike Battery Technology?

Amsterdam, the Netherlands--Can we expect an imminent breakthrough in battery technology and with that in cheap energy storage systems? It's not there yet; but something is appearing at the horizon. It's about batteries fitted with electrodes made out of wood!

Science, the world's leading journal of original scientific research, is publishing an article on the first research results of a Polish-Swedish group. Their study is called: "Searching for a better thermal battery."

Their initial results point at electrodes made out of lignin with polypyrrole. Lignin together with celluloses is the main ingredients of wood. The current energy storage systems are made with rare and expensive metals like cobalt.

As in the near future electrical energy consumption is expected to explode; there is a big need for cheap

battery materials that can be recycled. Will lignin and polypyrrole collected from trees bring that material? The Polish-Swedish research is still in its early stages.

But the article in Science describes in detail the galvanic preparation of thin layers of a new electro-active substance on electrodes.



Voltage:72V, 90V  
 Power:5Kw, 7.5Kw  
 Max speed:≥ 80km/h  
 Efficiency:85%  
 Noise:≤60dB  
 Weight:15kg  
 Standard:RoHS  
 With sprial transformer

Voltage:48V 60V 72V  
 Power:1.5Kw, 2.2Kw  
 Max speed:≤70km/h  
 Efficiency:86%  
 Noise:≤60dB  
 Weight:16kg  
 Standard:RoHS  
 With hall sensor

Voltage:48V 60V 72V  
 Power:1Kw, 1.5Kw  
 Max speed:≤55km/h  
 Efficiency:83%  
 Noise:≤60dB  
 Weight:9kg  
 Standard:RoHS  
 With hall sensor

## Rumours on Bosch & Samsung Battery Joint-Venture



**Ulsan, South Korea**—The rumors popped up recently. E-bike makers told about an imminent crisis between Robert Bosch GmbH and its South-Korean partner Samsung SDI on their battery joint-venture SB LiMotive Co. Ltd. Founded in 2008 and officially taken into operation end of 2010 the partnership between the two companies was formed for making lithium-ion battery cells for (among others products) hybrid and e-vehicles.

The lithium-ion battery cells for e-bikes fitted with the Bosch drive systems were planned to be manufactured at the Samsung SDI facility located in Ulsan. It is said that the two companies are to end their joint venture.

At the end of 2010, at the official SB LiMotive facility opening, the plan was to start with the series production of lithium-ion battery cells for 60,000 vehicles in 2012 and to expand this to up to 180,000 by 2015. Currently however, German newspapers report on a possible end of the partnership. They state that the two companies differ on

what's to be produced.

Due to its history Samsung SDI is mainly interested in the production of high-end battery cells. Bosch is more looking at the entire system and is interested in addressing problems as overheating and durability. Due to such different views several projects were not finished yet. This led to frustration on both sides.

According to the newspapers Bosch is already working on a worst-case scenario; including the question how to secure the delivery of lithium-ion battery cells to its customers. According to a report in the Süddeutsche Zeitung, Bosch's lithium-ion battery customer BMW isn't that worried: "We expect that possible changes of the joint-venture won't influence any supply relation." For Bosch it has been important to be on board during the first phase: "Bosch is experienced in the automotive sector; Samsung comes out of the consumer electronics market."

## Honda Opens Solar Hydrogen Station in Japan's Saitama Prefecture

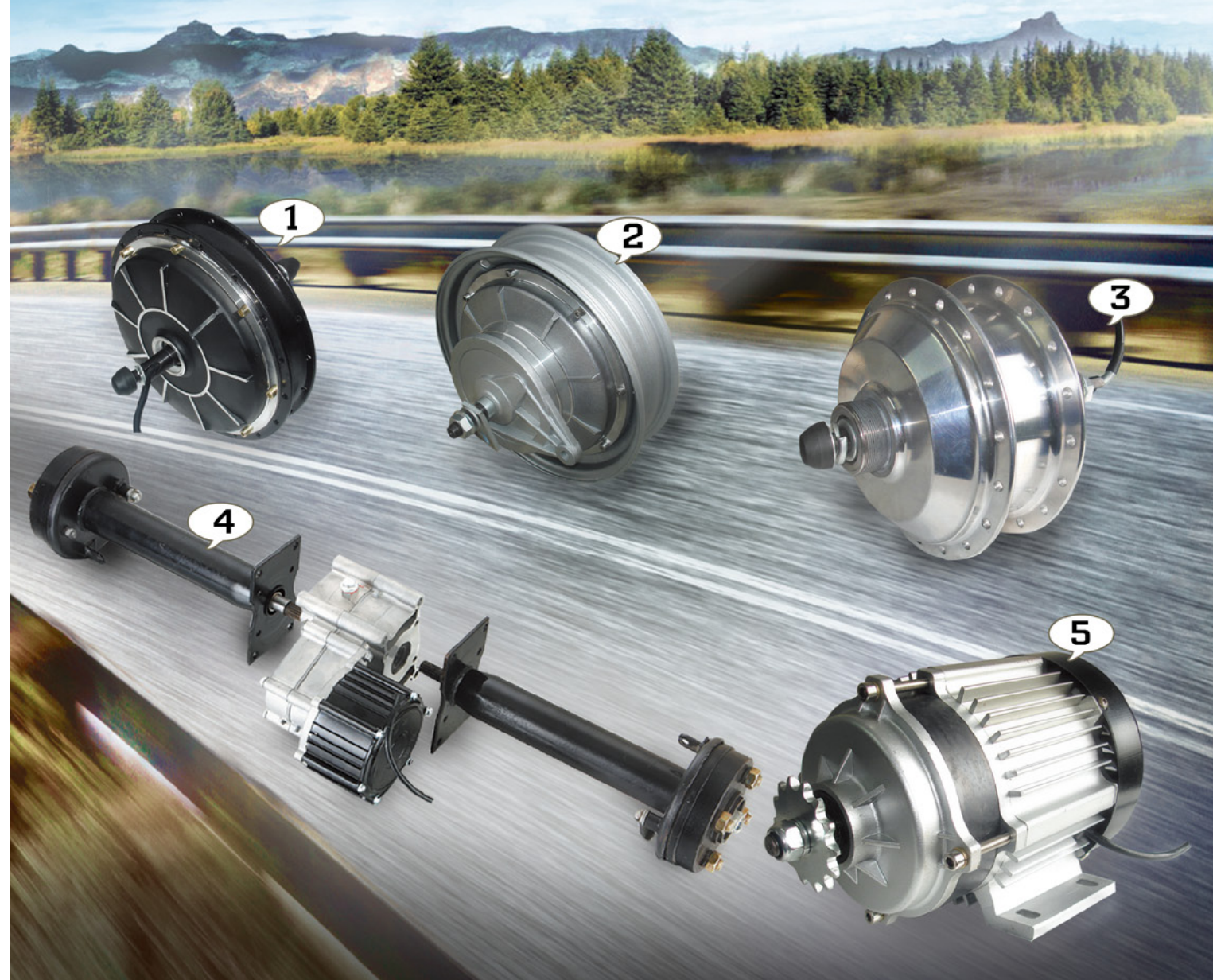
**Tokyo, Japan**—On March 27, Honda Motor Co., Ltd. unveiled a Solar Hydrogen Station on the grounds of the Saitama Prefectural Office. The initiative is part of the Electric Vehicle Testing Program for Honda's next-generation personal mobility products, in which Honda, Iwatani and Saitama Prefecture are currently collaborating. In a further initiative, Honda has equipped the FCX Clarity fuel cell electric vehicle with an outlet to function as a 9kW power source. Since the FCX Clarity uses a chemical reaction between hydrogen and oxygen to produce power with zero CO2 emissions, with its new outlet, the vehicle will be able to serve as a zero-

emission mobile electric generator.

This is the first installation in Japan of a total system to produce, store and dispense hydrogen with ZERO CO2 emissions. A high pressure water electrolysis system, uniquely developed by Honda, produces hydrogen. With no mechanical compressor, the system is nearly silent and highly energy efficient. Using Solar and grid power, the system is capable of producing 1.5kg of hydrogen within 24hours which enables an FCX Clarity to run approximately 150km or 90miles. Honda aims to further develop the system to offer clean energy sources for the home in the future.

# Specification

- |   |  |  |  |  |
|---|--|--|--|--|
| <p><b>1</b> Voltage: 48V, 60V<br/>Power: 500W, 800W, 1000W<br/>Speed: 530rpm<br/>Weight: 7.15kg<br/>Certificate: CE</p> | <p><b>2</b> Voltage: 48V, 60V<br/>Power: 500W, 800W<br/>Speed: 477rpm<br/>Weight: 8.5kg<br/>Dimension: 10 inches<br/>Certificate: CE</p> | <p><b>3</b> Voltage: 24V, 36V<br/>Power: 250W, 350W<br/>Speed: 250 rpm<br/>Weight: 3kg<br/>Certificate: CE</p> | <p><b>4</b> Voltage: 48V, 60V<br/>Power: 500W, 800W, 1200W<br/>Speed: 254rpm<br/>Weight: 19kg<br/>Certificate: CE<br/>With Planetary Gears</p> | <p><b>5</b> Voltage: 48V, 60V<br/>Power: 500W, 6500W, 800W<br/>Speed: 234 rpm<br/>Weight: 5.8kg<br/>Certificate: CE<br/>With Gears</p> |
|---|--|--|--|--|



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### Mifa's Double Digit Sales Increase

Sangerhausen, Germany--Volume wise the largest bicycle producer in Germany, the Mitteldeutsche Fahrradwerke AG (Mifa), saw its sales increase by 31.4 % in 2011 compared to 2010. Last year turnover reached € 100.5 million.

This is: "The highest turnover since 2007", the only year that Mifa ended with red figures.

In a press release Mifa mentions two reasons for its excellent results. Orders were up from the company's major mass market customers.

With that the total 2011 production reached 644,000 units; up 8.6% compared to 2010. Next to the higher production, Mifa managed to make good margins on its e-bikes. The bike maker claims to be the e-bike market leader at mass market channels in Germany.

Operating profit (EBIT) skyrocketed up to a total of € 4.7 million, an increase of 142%. Net profit tripled to a total of 1.5 million euro. Mifa-CEO Peter Wicht said that gross margins upped to 30 % which were: "Pushed by the e-bikes as well as efficiency improvements at the production".

"There's no other European bike

maker producing as efficient as Mifa," claims Wicht. In 2011 Mifa invested in new production technologies. This year the German stock-listed company is investing in a new, fully-automated parts warehouse.

According to Wicht the company's 2011 results underline the competitiveness of Mifa. The company's outlook is positive in particular after investor Carsten Maschmeyer stepped in as majority shareholder and Mifa's acquisition of a majority stake in high-end e-bike producer Grace GmbH & Co. KG.

Wicht sees a huge potential in e-bikes: "With the acquisition of a majority stake in Grace we surely will be able to significantly increase our sales in this segment." Next to that the Mifa CEO expects the company's financial results to grow further: "Our order books for the current season are filled and to such a level that we operate in three shifts at the moment."

## Evolve E-Bikes to Be Equipped with Saturna Green Systems

New York, U.S.A.--Saturna Green Systems Inc. ("Saturna"), an automotive wireless technology developer and GPS location-based services ("LBS") provider, recently announced an agreement with New York-based evolve motorcycles ("evolve") to incorporate Saturna's wireless Communications Platform on evolve's US-made electric scooters and motorcycles. The Platform will be available on certain evolve 2013 models, and represents the first time that LBS and telematics devices are installed on an electric scooter OEM's assembly line.

This Communication Platform of Saturna is pending for patent and comprises of three features. Firstly, a rugged on vehicle device,

which comprises GPS, High speed processor, 3D accelerometer and memory. Detailed data is collected by this device like speed, location, direction, altitude etc. from the motor, electrical systems and battery of the evolve scooter. Secondly, a digital dashboard, a HMI (Human Machine Interface), which has a large digital color touchscreen display. Thirdly, the Saturna or Evolve Cloud, a highly scalable and customizable application of software, which can open unlimited networking possibilities and number of location based services allowing the remote management of evolve scooters using device enabled by web.

Detailed info on range and charge



state will be provided by these features hence solving range anxiety. Also, the electric vehicles will be well connected to the charging infrastructures. The technology of Saturna will improve security and safety making urban social networking possible as well as enabling location based services like charging and road assistance.

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Web: www.chinaqianxi.com



SGS



#### TDF101Z

Max speed: 25KM/H (EU) 32KM/H (USA)  
Net weight: 28KGS  
Motor power: 180-250W ( EU ) 350w(USA)  
Brake: Fr: Disc Re: V / SERVO Brake  
Battery: Lithium battery  
Speed: 6Sp/ 7Sp Shimano gear

SGS



#### TDF102Z

Max speed: 25KM/H (EU) 32KM/H (USA)  
Net weight: 25KGS  
Motor power: 180-250W ( EU ) 350w(USA)  
Brake: Fr: Disc Re: V / SERVO Brake  
Battery: Lithium battery  
Speed: 6Sp/ 7Sp Shimano gear

SGS



#### TDF105Z

Max speed: 25KM/H (EU) 32KM/H (USA)  
Net weight: 25KGS  
Motor power: 180-250W ( EU ) 350w(USA)  
Brake: Fr: Disc Re: V / SERVO Brake  
Battery: Lithium battery  
Speed: 6Sp/ 7Sp Shimano gear

SGS



#### TDF103Z

Max speed: 25KM/H (EU) 32KM/H (USA)  
Net weight: 28KGS  
Motor power: 180-250W ( EU ) 350w(USA)  
Brake: Fr: Disc Re: V / SERVO Brake  
Battery: Lithium battery  
Speed: 6Sp/ 7Sp Shimano gear

## German Market in Positive Mood Thanks to E-bikes

**Berlin, Germany**—Thanks to the growing popularity of e-bikes, the Germans continue to spend more money on cycling. According to the 2011 sales statistics on the German bicycle market published by the country's industry organization 'Zweirad Industrie Verband' (ZIV) total sales value was up 8.8% to just under € 2 billion.

In 2011 approximately 4.05 million bicycles and e-bikes were sold to the trade; an increase of 1.1% compared to 2010, say the ZIV's statistics. With an average of € 495; the retail price per bike (including e-bikes) continues to rise.

"The main reason for the growing average retail price is the steadily increasing portion of higher priced e-bikes together with the quality awareness of consumers",

commented Siegfried Neuberger, ZIV's general manager. In 2010 the total market volume of e-bikes amounted to some 200,000 units, while in 2011 approximately 310,000 e-bikes were sold.

"Cycling in general is very popular at the moment in Germany. Especially, for everyday mobility more and more people take their bike for commuting, shopping and for leisure. Not surprisingly the size of the German bike fleet rose with 1 million units to 70 million last year. 80% of these bicycles are fully-equipped according to traffic regulations reflecting the growing mobility usage."

"The quality awareness of the German consumers is also reflected by the relatively small market share of imported bicycles. With 52.8 % of



all imports, one of every two bikes originates from Europe. Therefore the outlook for the German bicycle, bicycle parts, components and accessories industry could not be more positive", said Neuberger.



**Ashland, U.S.A.** -Brammo, Inc., a global leader in the electric vehicle industry, is proud to announce that

## Brammo Selects Sheffield Financial to Provide Retail Financing to Customers

they have signed an agreement with Sheffield Financial of North Carolina to provide their industry-leading motorsports retail financing through Brammo dealers in all 50 states of the USA.

"Sheffield Financial has a strong commitment to customer service that will be greatly appreciated by anyone who wants to ride a Brammo electric motorcycle," said Craig Bramscher, CEO and Founder of Brammo. "Sheffield's timely service and quick credit decisions are unmatched in our industry and we know that is something Brammo customers will value."

According to Jack Snow, President of Sheffield Financial, "With Brammo's innovative electric battery technology, it is poised to make a major impact on the

electric vehicle market. We are pleased to offer finance options to Brammo's customers."

### About Sheffield Financial

Clemmons, N.C.-based Sheffield Financial is a division of BB&T Financial, FSB, which is a subsidiary of BB&T Corporation (NYSE: BBT). Sheffield, which has financed more than \$6 billion in loans since its founding in 1992, currently services more than 30,000 outdoor power equipment, power sports and trailer dealers nationwide. The company provides retail financing options in all 50 states for outdoor power equipment, trailers and power sports equipment such as snowmobiles, all-terrain vehicles, utility vehicles and motorcycles. For more information about Sheffield Financial, visit [www.sheffieldfinancial.com](http://www.sheffieldfinancial.com).



### JMS-22D/60

Specification:

Motor: 3000W (C35), brushless

Battery: 60V 20Ah

Charger: 60V/3.0A

Shock absorber (F/R): 260mm/airbag 320mm

Tire: 120/60-13

Mileage: 60Km

Brake mode (F/R): hand brake

Brake (F/R): Disc



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LUHU 7



## Daimler and BYD Announce DENZA Brand for New Electric Vehicle



**Shenzhen, China**--The new DENZA brand for the electric vehicle developed by BYD Daimler New Technology Co. Ltd. (BDNT), the 50:50 joint venture between Daimler and Chinese electric battery and car manufacturer BYD, was formally revealed on Apr. 6th in Shenzhen at the "EV – The Future" event.

The DENZA brand launch event is the latest milestone in the successful cooperation between Daimler and BYD. Following the BDNT joint venture contract signing in May 2010 and granting of the China business license in March 2011, development has been progressing on schedule.

The DENZA name and logo have been carefully crafted to convey very precise themes. Primarily

created with a focus on Chinese consumers, the name DENZA derives its strength from profound and positive associations with the Chinese characters *téng shì*, which together mean "rising power and momentum" - referring both to the attributes of the car as well as the pace of development DENZA aims to be ahead in the New Energy Vehicle industry. DENZA is also a distinctive name in the English language with no prior associations.

The logo is designed around the flowing form of a central water-drop, supported by two hands. The blue water-drop represents the environmental friendliness of the all-electric vehicle, with blue also signifying advanced technology and a bright future. The curves on either side of the water-drop represent the hands of the two partners providing mutual support for the joint venture, as well as for the environment.

The first public appearance of the DENZA concept car was at Auto China in Beijing in late April, with first production planned in 2013. With rapid economic growth, increased urbanization, an open-minded consumer, and a supportive government, all the elements are in place to mark China as one of the countries with the highest potential for electric vehicle adoption.

## Segway Inc. Sponsors MotoCzysz Racing 2012

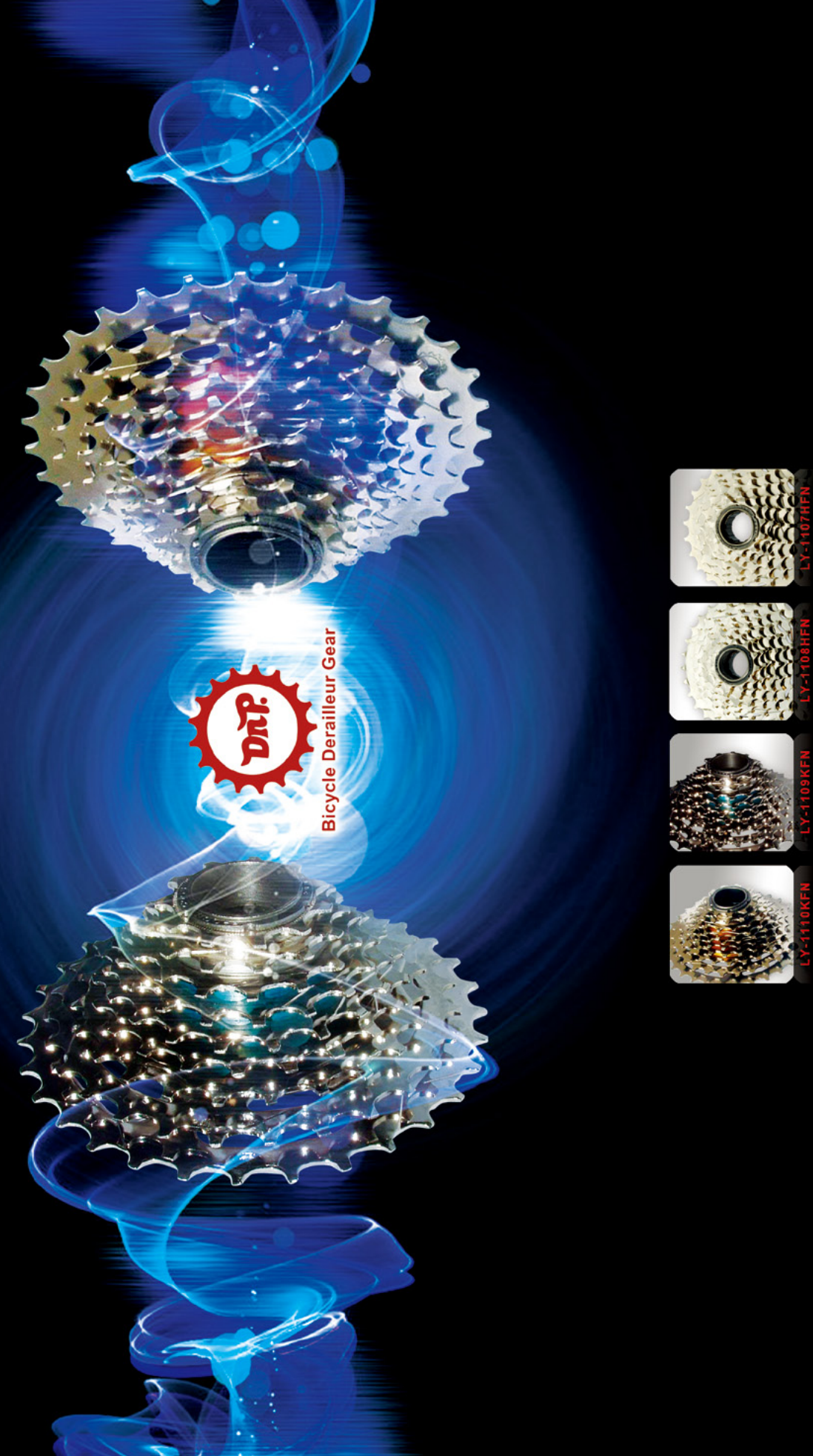
**U.S.A.**--MotoCzysz is pleased to announce that Segway will continue its title sponsorship of MotoCzysz's electric motorcycle racing program for the 2012 season.

Beginning with the SES TT Zero race taking place during 2012 Isle of Man (IOM) TT, from May 28 – June 8, Team Segway Racing MotoCzysz plans to continue their dominance at the Isle. Last year, team riders decisively took a One, Two finish. In 2012, Segway Racing MotoCzysz is looking to three-peat as well as become the first manufacturer to break the 100mph lap average for electric racing.

With both Mark Miller and Michael Rutter again piloting 2 new 2012 E1pc e-grand prix motorcycles, MotoCzysz's CEO, Michael Czysz, is optimistic about upcoming competitions. "It says a lot about the program and the relationships when everyone returns. Last year's race was executed to near perfection, with Segway Racing MotoCzysz taking first and second,



this year we hope to do even better." This year's competition will be even greater, and with the help of Segway, MotoCzysz is able to push the innovation and performance envelope even further. "I think the TT Zero race this year will be one of the highlights at the IOM," concluded Czysz, "we are bringing something very special."



**DNP INC.**

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ELECTRIC BIKES

## Focus: Accell in the Frame to Purchase Raleigh

**U.K.**—The Netherlands-based holding company Accell Group is in the frame to buy the Raleigh business. In fact it's the only potential buyer as it is currently 'engaged in exclusive discussions' with Raleigh and its shareholders.

Accell Group comes into negotiations on the back of a growing international portfolio of bicycle brands and distributors.

After selling its stake in German-set Derby Cycle for €17 million in last November, the firm has been swift to acquire an electric bike firm based in the US – Currie technologies and titanium bicycle builder Van Nicholas, all done deals before the end of the year.

And before that Accell has been no stranger to acquisitions and sports a vast roll call of names in its portfolio

including Koga, Sparta, Winora, Hercules, Hai Bike, Ghost, Lapierre, Atala, and Redline amongst others.

Earlier this year the firm revealed a rise in turnover and net profit for 2011. Turnover grew by nine per cent to 628.5 million (up from €577.2 million in 2010), with the group citing rising sales of electric and 'sports' bicycles, particularly in Germany.

The financial statement read: "Positive developments in working capital and a relative reduction of inventories created a strong cash flow. Partly as a result of a positive contribution on balance from one-off items, net profit for 2011 was up by 11 per cent at 40.3 million, compared with 36.4 million in 2010."

Perhaps significantly, turnover for Accell Group has been led by the Netherlands, Germany and France (in

that order), the rest largely composed from European countries.

Is this where Raleigh comes in? In 2011 the UK firm sold 850,000 bicycles and sales of over £162m per annum. That would give Accell a far more significant presence in the UK, which remains an attractive market. But beyond that, Raleigh's globally recognisable brand, forged over 125 years in the trade, must also hold some lure for Accell.

How a buyout would affect Raleigh's 100+ network of Cyclelife dealers, or indeed any part of the business, is naturally unclear at this early stage. What also remains to be seen is whether Accell has been motivated by a desire for a greater footing in the UK market or lured by the Raleigh brand, or both. Naturally we'll be keeping a close eye on developments.

**France**—Moustache Bikes, a new French company with a design-oriented e-bike range announced the introduction of a 'Ville' (city) and 'VTC' (trekking) series featuring the NuVinci N360 hub. Combined with the Bosch drive system, the brand aims to raise the bar for quality e-bikes in the French market.

Moustache Bikes developed the Lundi 26 inch city bike and the Samedi 28-inch trekking bike. Both feature the NuVinci N360 drive train in combination with Bosch mid motor e-bike system. The open frame of the Lundi 26 provides comfort and

safety for riders between 1.58 and 1.90 meters. The front headlight is integrated into the head tube, while the high-rise city handlebar offers a natural riding position with a straight back and the best field of vision. The Samedi 28 has a special touring or trekking handlebar that has fewer rises and more agility for a more sportive position or for longer rides.

The Moustache bikes are already available in France, Belgium, Luxembourg and Switzerland at a recommend retail price of € 2.799 (or CHF 3.999).



## Nuvinci Enters French Market with Moustache E-bikes

## Taiwan, France Sign MOU on Electric Vehicle Development



**Paris, France**—Two vehicle development organizations from Taiwan and France signed a memorandum of understanding (MOU) on March 30 on future cooperation in developing production standards and testing technology for electric vehicles. The partnership is aimed at eventually pushing for mutual certification of electric vehicles from the two countries.

Joe Huang, the president of Taiwan's Automotive Research & Testing Center (ARTC), signed the cooperation agreement with Laurent Benoit, head of the Union Technique de l'Automobile du Motorcycle et du Cycle (UTAC).

The ARTC, founded by various Taiwan government agencies and private enterprises, serves as one of the major developers of a wide range of services for the local vehicle industry, such as research and development, testing and certification. The UTAC is a private French company that has an official mandate for vehicle approval, safety testing, and vehicle inspection.

Huang said the MOU will pave the way for future cooperation between Taiwan and France, with the industrial sectors of both countries embracing high hopes of establishing a mutual certification system for electric vehicle production in the future.

Duh Tyzz-jiun, the director general of Taiwan's Industrial Development Bureau, led Taiwan's delegation to a bilateral industrial cooperation conference held in Paris on March 28 and witnessed the signing ceremony on March 30. Duh said Taiwan has laid a good foundation in electric vehicle production, in particular in the development of components such as batteries and power control systems, and he believed there was room for the local electric vehicle sector to grow.

Meanwhile, Venturi of France signed a letter of intent with Taiwan-based Advanced Lithium Electrochemistry Co. to cooperate on the development of electric bus.



## E-VEHICLE SMART TIMER

Application scope: e-vehicle, cell-phone, home-use appliances



## INTELLIGENT DESIGN

### Competitiveness of charger timer:

1. Five-shift humane design, flexible adjustment of the charging time.
2. Normally, the full charging time is supposed to be 8hrs. Often times, it's not easy to control the time due to the fact that most people charge at night, which is quite possible to overcharge and shorten battery's life. The charger timer can set the charging time according to user's need and avoid either overcharge or undercharge.
3. The timer can set the best charging time according to the practical condition of battery. The humane design avoids the trouble to switch off the charger at night.
4. Normally after one year's use, the charging indicator won't be able to turn on if too much liquid lost, and the constant big current charging will short battery's life. The timer will effectively prolong battery's life through accurate charging and cutting the power supply at the right time.
5. The timer is able to set the right time so as to supply protection for both battery and charger besides some other benefits such as money-saving and easy operation.

We are seeking for long-term agents at present!

Foshan Minyu Vehicle Accessories Co., Ltd.  
 Addr: Luocun Industrial Zone, Dalishuitou Road,  
 Nanhai District, Foshan, Guangdong, China  
 Tel: 0086-757-85551467 Fax: 0086-757-85551417  
 Mobile: 18988545341 Contact: Mr. Shen  
 Web: www.minyupump.com

## New Energy Vehicle Goal of GAC in 2015: 200,000

**China**—On the Global Auto Leaders Forum, the Chairman of the Board Zhang Fang of GAC Group introduced that GAC Group plans to realize the goal of a production and sales volume of 200,000 new energy vehicles in 2015.

According to Zhang Fang, four factors should be taken into consideration in new energy vehicle industrialization, namely, industry supporting, government support force, people's using habit and awareness of environmental protection.

Zhang Fang said in a media interview last year that GAC had worked out the strategy of energy saving and new energy vehicle development: GAC will enhance industry chain cooperation through various ways including EV production, study and research union,

adhere to the principle of taking PHEV as the key emphasis in work, PEV as the major strategic direction and continuous follow-up of other new energy vehicle types to arrange independent R & D of energy saving and new energy vehicle, strive to break through the key technology and platform technology, master and control the R & D and production technology of HEV, PEV and EV.

It is learned that the specific goal is

to build the national-level EV project laboratory, form the manufacturing capability of three major products including motor, battery and controlling machine, master five core technologies including complete vehicle control, motor system integration, battery management technology, battery system integration technology and hydrogen fuel battery technology and realize a production and sale of volume of 200,000 new energy vehicles in 2015.



## Pure Electric Buses to Reach 2,000 Units in Tianjin in 2015



**Tianjin, China**—Recently, the reporter learned from the State Grid Tianjin Electric Power Company that the implementation scheme for Tianjin pure electric bus demonstration operation project was passed. There will be 460 pure electric buses put into operation in Tianjin in 2012 and this number will reach 2,000 in 2015.

In order to ensure electric bus charging and operation, the

State Grid Tianjin Electric Power Company will construct charging and battery replacement stations near the outer ring road and the periphery of the central urban area in combination with the locations of bus stations. From the end of June this year, the State Grid Tianjin Electric Power Company will firstly complete the construction of Haitai landmark hub charging and battery replacement stations and security monitoring and management platform of Tianjin and the first batch of 40 pure electric vehicles will be put into operation. In the second half of 2012, three charging and battery replacement stations including Fulijinmenhu and No. 4 Bus Company with a total of 460 pure electric buses put into operation.

According to the plan, four charging stations will be constructed in 2012. A total of eight charging and battery replacement stations can meet the operation of 1,000 pure electric buses. In 2015, there will be 2,000 pure electric buses and 6 charging and battery replacement stations in Tianjin.

## South Korea Surpassed Japan in Global Lithium Battery Market Share in 2011



**Japan**—Nihon Keizai Shimbun report, according to the Japan market investigation company—Techno Systems Research, the global lithium

battery market share of South Korean enterprises reached 39% in 2011, surpassing Japan (35%, raking No. 2) for the first time and becoming the world's largest lithium battery producing country, which was mainly attributed to depreciation of KRW, appreciation of JPY and the impact of national disasters.

Among South Korean enterprises, the global lithium market share of Samsung reached 23%, up 3% year on year; LG

Chem 16%, up 2% year on year; among Japanese enterprises, Panasonic 24%, down 2% year on year and Sony 8%, down 3% year on year. Under the background of continuous appreciation of JPY, Japanese products with high costs are no match for the cheap South Korean products, and Japan Earthquake has also seriously impacted the normal production of enterprises including Sony.

Techno Systems Research has been engaged in this investigation since 2008 when the global market share of Japanese enterprises including Sony and Panasonic was about 50%. In order to regain the leading position in lithium battery, Japanese enterprises have begun the counter attack on a large scale. Sony plans to shift its lithium battery assembly factory to China and Singapore in March 2014 to further reduce costs and Panasonic plans to set up a new factory in Suzhou, China in the first half of this year.

## Eurobike Award 2012

**Friedrichshafen, Germany**—For the eighth time, innovations in the bicycle industry will be awarded by Eurobike. Organized by Messe Friedrichshafen and iF-Design, the Eurobike Award event is again part of the Eurobike show that starts this summer on August 29.

Exhibitors and non-exhibitors of the Eurobike Show are invited to sign up their product innovations for the competition. The entries should have outstanding quality and innovation levels and have a high design standard. It is possible to submit in the following categories: mountain bike, cross bike, road race bike, urban bike, specialized bike, e-bike/pedelec, clothing, parts & components and accessories.

The jury will meet on 14 and 15 August 2012 in Hannover to select the Gold award winners. These Gold award winners are regarded the most innovative contributions to the Eurobike Award 2012.

The winners will be honoured at an official award ceremony on 29 August 2012, the first day of Eurobike in Friedrichshafen, on the fashion show stage in the foyer East. All winning products will be



on display during the show from 29th August to 1 September 2012 in the West Foyer.

This year Messe Friedrichshafen expects some 1,200 companies to exhibit, as well as 40,000 trade visitors from over 100 countries, 20,000 consumers interested in cycling and nearly 2000 journalists.



## How many green leaves are left on the earth?

Nowadays, exhaust waste from motorcycles has occupied 30% of the global CO2 emission. When the whole world is focusing on "Low Carbon Economy", there come an opportunity and a mission for the new energy vehicles of electric motorcycle industry.

Xinling Electric Motorcycle of National Standard

# XL-EM13

### Low Carbon & Environment Protection, Electric Motorcycle Era Usher in the Electric Motorcycle Era

The civilization of human beings has entered an unprecedented booming era, sadly, all this is built on the ruthless sacrifice of natural resource and ecological environment. People realized this has started leading a life of energy-saving, emission reduction and low carbon. The electric motorcycles by Xinling, XL-EM13 and XL-EM04, come into existence against this background, which are defining a new life style.



**JIANGSU XINLING MOTORCYCLE FABRICATE CO., LTD.**

Tel: +86-510-88101119 Email:sales@cnxinling.com Fax: +86-510-88716503 Web: www.xinlingmotor.cn



# NATIONAL STANDARD ELECTRIC MOTORCYCLE, OPEN THE ELECTRIC ERA OF MOTORCYCLES

Deal with tough road conditions at ease as fuel powered motorcycles, and, more economical Better power performance than e-bikes Top Speed: 60km/h Max Range at one-charge: 100km Max Load: 150kg



# XL-EM13

Optional Configuration:  
Spoke-styled, front & rear drum-brake; Aluminum, drum brake;  
Aluminum, front disk & rear drum brake; Aluminum, front & rear disk brake



### **XL-EM09**

Dimension:1880*680*1150mm
Max speed:45-70km/h
Continues mileage: 40-60km
Motor Type: 1000W-2000W, brushless
Wheel Base: F&R, 3.50-10
Battery : 420Ah-40Ah silicone & lithium
Packing size: 1650*570*860mm



E-Scooter experts



### **XL-EM06**

Dimension:1700*670*1060mm
Max speed:35-45km/h
Continues mileage: 40-60km
Motor Type: 500W-1000W, brushless
Wheel Base: F&R, 3.00-10
Battery : 20Ah-40Ah silicone & lithium
Packing size: 1600*460*860mm



E-Scooter experts



### **XL-EM08C**

Dimension:1880*830*1100mm
Max speed:35-70km/h
Continues mileage: 40-60km
Motor Type: 500W-1500W, brushless
Wheel Base: F&R, 3.50-10
Battery : 20Ah-40Ah silicone & lithium
Packing size: 1950*570*860mm



E-Scooter experts

### **XL-EM03**

Dimension:1870*705*1120mm
Max speed:35-45km/h
Continues mileage: 40-60km
Motor Type: 48V500W-1000W
Wheel Base: F&R, 89/90-14
Battery : 20Ah-40Ah silicone & lithium
Packing size: 1750*560*860mm



E-Scooter experts





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# ZPM 2000DQT-2





# CHINA CYCLE

# REPORT 2012

RECESSION IS  
STILL GOING ON  
By Zoe Fu CHINA E-VEHICLE

BACKGROUND: CHINA CYCLE IS THE LEADING TRADE SHOW IN CHINA. IT TAKES PLACE IN SHANGHAI EVERY YEAR IN LATE APRIL OR EARLY MAY AND PRESENTS THE ENTIRE RANGE OF TWO-WHEEL PRODUCTS IN AN INTERNATIONAL SETTING. IT IS THE 22ND TERM THIS YEAR.



Argos-shimano



People can also see another trend from the show, lithium battery is getting more and more attention both at home and abroad, every people in this industry knows that European and America used the lithium battery-powered bike a lot, they may don't know that some companies already turned their eyes to China, CITYBUG is a Taiwan brand, who is specialized in the high-end e-bike, their bike made its debut in CHINA CYCLE, Ms. Sandra Lee, the manager of CITYBUG China told CHINA E-VEHICLE that they already made a long-term strategy to enter China's market, she said the average price of their e-bikes is around RMB 12000-13000 which is focused on the high-end consumers. The market of Lithium battery-powered e-bike in China is still relatively new though China produced about 26 million e-bikes and e-scooters each year, but only 2.5% of them are powered by lithium battery, and most of these bikes are exported to abroad. Sandra also thinks the right time still has yet come, but she thinks it is better to make the strategy to get initial preparation for the booming era to come, the first

CHINA CYCLE is the biggest global cycle show from the perspective of scale. 2012 marked its 22nd anniversary (26th - 29th April). According to the official released data, the exhibition this year is unprecedented on scale with exhibitors of 1300 foreign and domestic enterprises, and 5900 booths covering indoor space of 120000 sq.m (excluding outdoor space). Viewing from these figures, the show must be very successful and everybody is supposed to be happy. In the past few years, many countries took the toll of the global economic recession, China also suffered a lot from it, but the economy keeps growing soundly though. China is the biggest bicycle market in the world, and now it is very possibly becoming the biggest high-end bicycle consumer as well, this also explains why it attracted so many global brands from Italy, Holland, France, Germany, Spain, Britain, USA and Japan etc. to its venue, e.g. NuVinci (USA) Specialized (USA), Huffy, Five-ten, Endura (GB), AXA (Holland), Cat Eye(Japan), GHOST(Germany), some big brands already become the familiar faces of this exhibition such as BIANCHI, SHIMANO, SRAM, BH, SIGMA and DT Swiss etc. According to Mr. Xu, President of SPECIALIZED China, "SPECIALIZED has attended the exhibition in 2005 and 2006, the market was very limited then, but the situation is completely changed now, our business volume of both high-end and middle-end in China's market has realized a 400% growth, which indicated the huge potential of this market, this is why we come back to CHINA CYCLE again."





CYCLE, they are also looking for chances to partner with Chinese companies to promote their technology. Ms. Heidi Lubin is from HEVT (Hybrid Electric Vehicle Technologies) which is specializing in the R&D of high performance, efficient and cost-effective powertrain and components for hybrid and electric vehicles, she told CHINA E-VEHICLE that this was her first time coming to China, she felt quite excited about the show and told us the negotiation with some Chinese companies are still going on. All these above mentioned cases lead to a single fact that more and more foreign companies especially the light electric vehicle market. China's EV market, and R&D institutes show great enthusiasm for the time being, the brutal price competition already become history, the survivors after the tide will be the ones weaponed with new technologies and R&D strength, it will be a great chance for them if they can find the right way to collaborate with these companies.



On the other side, many Chinese e-bike exhibitors are not so happy this year. Due to the continuous affect by the European recession and the slow economy of America, the buyers from these countries are less than last year, many exhibitors complain about this. The first day was slow and the 2nd picked up a bit then came

step is to increase the brand awareness in the market and build the image in the consumer community. This year, the enthusiasm of the e-bike exhibitors is just like never before, the battery and motor companies also attached great significance to the exhibition, Greentrans, Phylion Battery, Lishen Battery, 8Fun Motor and Angyang Motor all presented, NuVinci ([www.fallbrooktech.com](http://www.fallbrooktech.com)) also came again, this company has been very successful in European market, especially in Germany, the President Mr. Alan M. Nordin told CHINA E-VEHICLE, they are also looking forward to collaborate with Chinese companies to supply them the top-class e-bike transmission system, he also expressed his confidence and hope in China's high-end e-bike market. Santa Monica is another America-located electric vehicle driving system R&D company and supplier ([www.santamonicaev.com](http://www.santamonicaev.com)), which is also a regular guest of CHINA



another slow day, the last day was also not that busy. Many exhibitors felt just confused after the slow Canton Fair. Some companies are confused about which market they should enter, and some companies are still struggling about the right bike model. There is a problem with some Chinese companies, CHINA E-VEHICLE interviewed most of the exhibitors in the W5 (E-bike and Components Hall), many sales staff just don't know where their market is and the right model for different overseas market, this already become a common problem with many Chinese companies. They don't have a very clear idea where they should sell their bikes and which bikes they should sell to the certain area. Surely, there are always exceptions. AIGENI is a new e-bike brand, which started their overseas market since last year, but it is very successful so far. CHINA E-VEHICLE interviewed the Sales Manager Mr. Wang Jiade during the show, who has been in the e-vehicle industry since early 1990s, he told us their biggest market is in Holland for the time being, they also have clients from Britain and Hungary, the business is still growing. During the interview, he stressed again and again that Chinese companies must stop the price competition, they should get together to lead the industry on the right way rather than only lowering the price which will injure everybody involved at the end. He said the companies should shoulder certain responsibility for the whole industry, they must get rid of all the low-level

competition moves, which is a doomed failure viewing in the long term. He told us the companies have to know what is going on in the global market, must know which model people of different countries prefer, they can not just shut them down behind the door. The people in charge of overseas market have to know the requirements of different people in overseas market. The truth is many Chinese companies just don't do that, they rather just want to kill their competitors at any cost. Maybe the competition in China already eased a bit, but the fire has burnt out in some overseas market, some companies don't respect the market rules, their only aim is to robbing the market share from the other companies, this ugly play is on stage right now in Turkey between some Chinese companies.



Yes, the exhibition is a bit slow this time, but I truly think maybe this is the right time for Chinese to make utmost advantage of their own advantage. They should take the time as the best chance to cut into the overseas market by their competitive price and quality. But, there are high requirements, first they should have a professional trained sales team, the team members should familiar with their market and their models, they should be fully aware of the present trend. This will definitely cost money in the beginning, but will rake in big harvest after. Second they should know the right way to push forward, attending some proper seminars is a proper way to



get to know more people in this industry and learn good lessons from the successful companies. During the exhibition, CBA (China Bicycle Association) and LEVA co-organized a forum themed on "Opportunities and Challenges for the International Bicycle and E-bike Industry". Some seriously important people attended and made speech at the forum, they included Mr. Ma Zhongchao (Chairman of CBA), Ed Benjamin (President of LEVA), Mr. Yu Shiguang (Director of National Bike Industry Information Center), Jack Ootwijn (Chief Editor of Bike Europe), Mr. Wang Qinghua (General Manager of 8Fun Motor) among the others. Their speech included the analysis of both China's and global e-bike market and some entrepreneurs shared their successful experiences with the audience. All of these are very significant information for the Chinese companies. It is also a very valuable occasion to make new friends in this industry, which is definitely good for their business. But according to my observation, many Chinese companies just don't care or don't even know about it.

## E-BIKE SHOWROOM AT CHINA CYCLE 2012



**Brand: Aigeni**  
**Model: AF7010**  
**Manufacturer: Aigeni Technology Co., Ltd.**

**Specifications:**  
 Motor: 36V 250W F/D Brushless  
 Battery: 36V 10AH Lithium battery  
 Function: SW-LCD display, 5-speed level  
 Charger: AC100-240V, smart charger  
 Charging time: 4-6 hrs  
 Frame: Alloy 6061  
 Tire: 700x38C  
 Brake (f/r): V/Roller  
 Derailleur: Shimano Nexus 7  
 Dimension (mm): 1410x250x910

**Brand name: Goccia**  
**Model: CITY HOLIDAY W/M**  
**Manufacturer: Goccia**  
**Specifications:**  
 Battery: Li-ion, 24V 10AH  
 Motor: 24V/250W brushless hub-motor, 8 Fun  
 Display: LED, KingMeter  
 PAS Modes: 3levels, Low-Medium-High 5 levels, 1-2-3-4-5  
 Lamps(F/R): Goccia/Goccia  
 Sensor: Speed sensor  
 Max speed: <25km/h with PAS  
 Range: High PAS: 30km, Medium PAS: 40km, Low PAS: 50km  
 Charging time: 4-5 hours  
 Derailleur: Shimano Ext-7 speeds  
 Shimano Nexus Inter-3  
 Wheel size: 26", 28"  
 Weight (NW/GW): 24.5kg/30kg  
 Frame size: 46cm, 49cm, 53cm  
 Frame material: Aluminium Alloy, 6061#  
 Front fork: Zoom, Suspended  
 Rims: Aluminium alloy

**Brand name: ENZO**  
**Model: Pilot**  
**Manufacturer: Tianjin Golden Incalcu Bicycle Co., Ltd.**  
**Specifications:**  
 Size: 24"  
 Frame: Aluminum Alloy  
 Motor: BLDC geared 36V 250W  
 Battery: 36V 10Ah Li-ion  
 Derailleur: Shimano 6-speed  
 Charging time: 4hrs  
 Range: 50-60km  
 Top-speed: 28km/h  
 Max load: 150kg



Yes, it may not the best time for the global economy, but people cannot blame their slow business to the global economic climate, it is equal to all the people involved in said, but why do the chances just go the this company instead of the others? Some are completely out of just luck, but in most cases, I should say that because the successful people know how more to get to success than the others. CHINA E-VEHICLE

**Brand name:** Konson  
**Model:** Ouma TBD-622Z  
**Manufacturer:** Tianjin Feike Electric Bicycle Co., Ltd.  
**Specifications:**  
**Frame:** Alloy  
**Fork:** Fixed, Steel crown and legs, integrate  
**Brake (f/r):** Alloy V-brake, Promax/ Shimano coaster brake  
**Derailleur:** Shimano Nexus 3-speed  
**Motor:** 36v 250W brushless  
**Battery:** 36V 10Ah lithium  
**PAS system:** 36V, 3-speed assistance levels optional



**Brand name:** Geoby  
**Model:** City 7008 Eub  
**Manufacturer:** GEOBY Electric Vehicle Co., Ltd.  
**Specifications:**  
**Frame:** 28" Alloy6061  
**Fork:** Alloy suspension  
**F brake:** V-Brake  
**R brake:** Roller brake Shimano BR-IM50R  
**Saddle/Seat post:** BK / Alloy  
**Handlebar/stem:** Alloy / Alloy adjustable  
**Gears:** Shimano Nexus Inter 7 speed  
**Motor:** 250W Brushless motor hub  
**Battery:** 36V/8.8Ah  
**Charging time:** 4-6hrs  
**PAS:** Torque Sensor  
**Range:** 60~70KM  
**Weight:** 23.6KG



**Brand name:** CYCLEMAN  
**Electric Bike**  
**Model:** CEB04B  
**Manufacturer:** CYCLEMAN E-VEHICLE CO., LTD  
**Specifications:**  
**Frame:** 6061 Al alloy. 700c wheel  
**Battery:** 36V 10/13Ah lithium

**Range:** 50-80km  
**Motor:** 180-250w for EU & Australia; 350-500w for USA  
**PAS:** Adjustable LED/LCD PAS display  
**Fork:** Al alloy suspension  
**Brake (f/r):** V/Roller  
**Derailleur:** Shimano Nexus 3/7/8speed

**Brand name:** SEVENONE  
**Model:** U0205  
**Manufacturer:** Kunshan Sevenone Cycle Co., Ltd.  
**Specifications:**  
**Frame:** 28" aluminum  
**Fork:** Sr nex suspension fork  
**Stem:** Alloy stem, toolless adjustment  
**Seat post:** Suspension, aluminum  
**Derailleur:** Shimano Nexus 8  
**Rim:** Double wall aluminum rim  
**Tire:** Kenda tire with DV valve with reflective strap

**Carrier:** aluminum carrier for battery  
**Saddle:** Velo city saddle  
**Motor:** brushless  
**Battery:** Li-NiCoMn 36V 8.8Ah  
**Display:** LCD, 5 assist level  
**Lamp (f/r):** head lamp on fork/ rear lamp on batter. AA battery



**Brand name:** BASHAN  
**Model:** BS-MFR41-TA  
**Manufacturer:** Wuxi Bashan E-vehicle Co., Ltd.  
**Specifications:**  
**Motor:** 250W geared hub brushless motor  
**Battery:** 36V 10Ah Li-ion battery  
**Controller:** smart brushless  
**Charger:** AC 100V-240V 2 amps smart charger  
**Sensor:** torque sensor  
**Frame:** Aluminum alloy 700c  
**Derailleur:** Shimano  
**Fork:** Al alloy suspension  
**Brake:** V-brake  
**Rim:** Al alloy double wall and CNC side wall  
**Hub:** Shimano 7-speed  
**Handle:** Zoom alloy  
**Weight:** 23.5kg  
**Top-speed:** 25km/h



**Brand name:** Gladway  
**Model:** Am2006



**Brand name:** IVNENG  
**Model:** LN28C03  
**Manufacturer:** Jiangsu Lvneng Electrical Bicycle Technology Co., Ltd.  
**Specifications:**  
**Motor:** brushless middle-mounted motor 250W (EU), 350W (USA), 200W (Australia and New Zealand)

**Battery:** 36V, 10Ah lithium battery  
**Charger:** 110-240V, 50/60HZ smart charger  
**Controller:** intelligent controller  
**Display:** LED  
**Frame:** Al-alloy suspension fork  
**Brake system (f/r):** V brake  
**Derailleur:** Shimano 7-speed  
**Rim:** al-alloy double wall 700C\*38C  
**Dimension:** 1780x620x1220mm  
**Top-speed:** 25km/h  
**Range:** 70km with PAS, 40km without  
**Charging time:** 4-6hrs  
**Max load:** 130kg

**Brand name:** HAMSUN  
**Model:** HSM204  
**Manufacturer:** WUXI HAMSUN AUTOCYCLE CO., LTD.  
**Specifications:**  
**Dimension:** 1870x550x1060mm  
**Motor:** brushless DC  
**Rated power:** 500W  
**Battery:** 36V 12Ah lithium  
**Top-speed:** 25km/h  
**Range:** 55km  
**Brake system (f/r):** disc/disc  
**Max loading:** 100kg



**Manufacturer:** Jinan Gladway Import & Export Co., Ltd.  
**Specifications:**  
**Frame:** aluminum alloy  
**Brake system (f/r):** disc/disc  
**Front fork:** RST  
**PAS:** Torque sensor  
**Range:** 30km+  
**Motor:** front drive 250w 36V  
**Tire:** 26" Kenda  
**Derailleur:** Shimano 9-speed  
**Saddle/seat:** Velo/Promax  
**Top-speed :** 25km/h (EU), 35km/h (USA)  
**Max load:** 100kg  
**Battery:** Panasonic lithium battery

# NuVinci

## Where is Your Next Stop?

Interview of Mr. Alan Nordin, President of the Bicycle Division of Fallbrook Technologies, makers of the NuVinci® Transmission for bicycles and e-Bikes.  
By CHINA E-VEHICLE Team



Background: NuVinci® is a global well known e-bike transmission system. It was designed and developed by Fallbrook Technologies, an R&D company and supplier, which has specialized in the bicycle and electric two-wheeler power system market. The company has become the partner of a growing number of European, premium e-bike brands, and is also one of the most successful brands among its industrial colleagues. CHINA E-VEHICLE interviewed Mr. Alan Nordin during CHINA CYCLE 2012, who is the president of Bicycle Division of Fallbrook Technologies. Let share Fallbrook's success with its NuVinci continuously variable transmission here.



**CHINA E-VEHICLE:** Mr. Nordin, thank you very much for accepting CHINA E-VEHICLE's interview. Fallbrook and the NuVinci transmission has already become very famous in the European and American E-bike industry. For many Chinese companies, however, the brand is still unfamiliar to them. Would you please make a detailed introduction of Fallbrook and NuVinci hereby for the Chinese readers?

**Mr. Alan Nordin:** NuVinci® is the brand of a new type of CVT (Continuously Variable Transmission) that our company has developed over the last eight years. Honoring Leonardo da Vinci, the brand NuVinci represents a new mechanical invention to help improve the transfer of torque and power in vehicles ranging from bicycles to

electric vehicles. For the bicycle industry, we have developed two products: NuVinci N360 – a mechanical drivetrain with no steps and seamless shifting. The N360 is a direct replacement for internally geared hubs as well as derailleurs and helps make cycling easier by eliminating



the need to choose specific gears as the N360 has an infinite number of effective gear ratios from low to high within the 360% ratio range. The second product for bicycles is NuVinci Harmony™, an auto-shifting system for e-Bikes that works with the NuVinci N360 drivetrain. Harmony allows the rider to select the cadence (pedal speed) and while the bicycle speed changes, Harmony automatically changes the transmission ratio on the N360. This allows the rider to always be in the right gear ratio, optimizing electric motor assist power and battery range.

**CHINA E-VEHICLE:** Who are your major competitors in this industry both in America and EU?

**MR. ALAN NORDIN:** Because our CVT provides unique benefits and operating characteristics, we believe there are no direct competitors in the marketplace. With that said, our product replaces internally geared hubs (IGH) and derailleurs, but offers a completely different ride experience (ease of shifting, not having to select a specific gear, eliminating of shift shock interruption, etc.).

**CHINA E-VEHICLE:** What is the competitiveness of the NuVinci transmission system comparing to its competitors? I mean the specialty of NuVinci system.

**MR. ALAN NORDIN:** As a new product and technology, our pricing has been acceptable to many of the global bicycle OEM brands. We are priced competitively somewhere between other traditional geared systems and other internally geared hubs. Our customers are able to promote NuVinci as a new technology to help them sell their bicycle and e-Bike models more effectively.

**CHINA E-VEHICLE:** NuVinci is an America-based brand, how is the market back at home in America? How many e-bikes are sold over there and what is the NuVinci transmission market share back there? Who are your major partners in America?

**MR. ALAN NORDIN:** We initially launched NuVinci in Europe which has a large bicycle transportation market. Our market in North America began last year with now over 15 brands marketing bicycles with NuVinci N360. Key customers include Breezer, Dahon, Jamis, EVELO, Bodhi and Novara. We expect our share to grow as more brands adopt NuVinci, especially as North America grows its transportation bicycle market.

**CHINA E-VEHICLE:** In your opinion, when do you



think the American e-bike market will pick up speed?

**MR. ALAN NORDIN:** The North American e-Bike market has historically been one that is focused on recreational riders vs. transportation riders. I see that changing due to following reasons: rising price of gasoline which forces consumers to seek alternative transportation, support for bicycle transportation in key cities, and better equipped and designed bicycle models that consider the needs of a bicycle

commuter. We are seeing these changes in 2012 and I expect this trend to grow in future years.

**CHINA E-VEHICLE:** I interviewed quite a few Chinese e-bike exhibitors the past few days, most of them told me there are fewer European buyers than last year due to the sluggish economy in the EU countries. I am wondering if NuVinci business is also affected by the recession back in Europe since your products are focused on the high-end e-bikes.

**MR. ALAN NORDIN:** We have not seen an impact on the EU economy as it relates to sales of NuVinci products. In fact, Europe is our biggest growth market.

**CHINA E-VEHICLE:** How is NuVinci market share in EU? Who are your major partners there?

**MR. ALAN NORDIN:** Our market share is still small compared to the overall bicycle industry component suppliers (IGH, Derailleurs, etc.) who have been selling into the EU market for decades. With that said, we are making good progress in countries like Germany, The Netherlands, Switzerland, and France. We have over 60 brands now in Europe that are selling NuVinci N360 equipped bicycle and e-Bicycle models. Some of these customers include brands like Grace, Panther, Flyer, Simpel, Hercules, Batavus, Centurion, Pegasus, Bergamont, Raleigh, Stevens, Zemo, Riese & Müller, to name a few.

**CHINA E-VEHICLE:** How do you think about the CHINA CYCLE this year comparing with last year? Is it a bit slow or just like before?

**MR. ALAN NORDIN:** China Cycle attendance and customer traffic was strong for us so much like last year. We now have relationships with most Chinese bicycle brands and assemblers so the meetings are very productive. Many of these brands were displaying NuVinci equipped e-Bikes in their own booths so we are pleased with progress in this market.

**CHINA E-VEHICLE:** CHINA CYCLE is relatively more focused on the low and middle end products compared with Taipei Cycle and Eurobike, this is a bit different from your targeted market. What is the reason for your participation in the show each year?



**MR. ALAN NORDIN:** We plan on continuing our presence at China Cycle as we have a strong presence in China with our partner Perfect Sports Inc. (PSI) which helps us with our technical and sales support in China. We will most likely merge our booth efforts with PSI in the future and also grow the NuVinci displays within our customer's booths.

**CHINA E-VEHICLE:** Is NuVinci ready for the Chinese market? Are you planning to enter this area?

**MR. ALAN NORDIN:** We started with selling Chinese brands and assemblers which export bicycles to Europe, North America and Australia. Some of these same brands are looking at launching models with NuVinci for the domestic China market. At first these models will be part of the brand's premium priced models. But Chinese consumers' purchasing power has grown substantially in the past few years and are very interested in buying advanced products (just look at how many Lexus and Mercedes cars are sold in China today).

**CHINA E-VEHICLE:** Are there any companies in China making the similar system as NuVinci? Will you collaborate with Chinese partners to produce and market the system in China?

**MR. ALAN NORDIN:** We currently manufacture the N360 in China with a partner and also have a joint venture in China for other products. Although we are not currently looking for additional partners, the future may offer more opportunities.

**CHINA E-VEHICLE:** I know some Chinese motor supplier looking for the chance to enter the EU market, but many of them are just confused about how to get in, do you have any

suggestions for them? How did you successfully find the partners in EU? (I mean the marketing strategy here.)

**MR. ALAN NORDIN:** When I first went to Europe from the United States, I had one demo bicycle with our first transmission to show customers. After visiting more than 20 bicycle brands in Europe, I knew that was where we would introduce NuVinci products. Now, I have a team in Europe with operations based in The Netherlands and Germany providing support in multiple languages. You have to commit to having a presence in any market if you expect to be successful. We did this one step at time and now the European bicycle industry is familiar with and supports NuVinci products. CHINA E-VEHICLE



We hereby would thank Mr. Alan Nordin for accepting our interview and also many thanks to Kim to arrange the interview for CHINA E-VEHICLE.

# TAIWAN OPEN NEW ERA IN MOTORING GREEN ENDEAVORS

EV TAIWAN 2012 STAGES TOP EVENT OF TAIWAN EV'S INDUSTRY IN 2012

EV Taiwan and Motorcycle Taiwan are wheeling out some of the most exciting products, bikes and concepts as they unfold from April 12 to 14 at TWTC Hall 1. The joint four-day events run in sync with Taipei AMPA and AutoTronics Taipei to host 1,400 exhibitors from home and abroad who used 3,600 booths to connect a vast and varied, yet overlapping market.

Very upbeat are the participants in EV Taiwan (the 2nd Taiwan Int'l Electric Vehicle Show) and MORTORCYCLE Taiwan, who have seen exhibitors soar 25% to reach 230. They have also expanded scale by using 702 booths, an increase of 43% over last year's show.

This mega-four venue super show venue on motoring is expecting 20,000 buyers and vendors from home and abroad to use its one-stop shopping venue that serves and inspires the global industry.



The four exhibitions are expected to generate considerable business opportunities for both the two- and four-wheeled auto industries, creating a complete industry chain in the upstream, midstream, and downstream auto parts sectors.

Taiwan is a leading supplier of AM parts and components and this is the place to scout it all at a hub that was commissioned by the Bureau of

Foreign Trade, Ministry of Economic Affairs and co-organized by Taiwan External Trade Development Council (TAITRA), Taiwan Electrical and Electronic Manufacturers' Association (TEEMA), and Taiwan Transportation Vehicle Manufacturers Association (TTVMA).

## EV TAIWAN 2012 STRESSES ECO-PROTECTION & ENERGY EFFICIENCY

Following the dazzling success of last year's EV Taiwan, this event picks up on the massive changes which have driven the market and industry. EV Taiwan is one of the few exhibitions exclusively dedicated to EV and its concerns mesh with Taiwan's industry that covers the up-, mid- and downstream supply chains.

To guarantee success EV Taiwan, TAITRA, its organizer

has opened mutual promotion agreements with other EV events including eCartec Munich of Germany, eCarTec Paris of France, Ecomobiel of the Netherlands, EVEX of Japan, and EVS26 in the USA.

## THE 2ND EV TAIWAN JOINS MAJOR TAIWANESE MANUFACTURERS, INCLUDING:

- All Win Green
- Pihsiang
- Giant Lion
- Tung Keng
- Dijiya
- Delta Electronics
- Fukuta Elec. & Mach.,
- Luxgen, Chroma ATE
- Honlin Heavy Industries
- Yulon Tobe
- Her Chee Industrial
- Kentfa Advanced Technology
- Greentrans (CMC Motor)
- Masterhold
- TCV Industrial
- Lanyang Energy
- WS Forever
- Asia Pacific Fuel Cell
- Teco
- Micro Spring Technology
- CityPower Taiwan
- ABB
- AC Power



Taiwan Automotive Research Consortium (TARC)  
TD Hitech Energy

Meanwhile the Ministry of Economic Affairs has included EVs in its Green Energy Industry Sunrise Plan by slating it as one of the most forward-looking industries with great potential.

Their Plan underscores growth of key industries according to potential and is in place to assist the EV industry shift to low-carbon, high-value development.

The smart electric vehicle has been designated by the Executive Yuan as one of the Four Major Intelligent Industries and state supports are in place to encourage R&D, and pilot programs to plug in such advantages to the transportation network and the electric grid. One of the results of this program has been rapid developments in Taiwan-made e-vehicles like electric bicycles, electric motorcycles and electric cars.

And with these developments a complete EV industrial chain is taking shape with the enhancement of upstream battery raw materials, motors, and electrical power system integration of downstream completed vehicle manufacturers which has underpinned exports of key components, especially batteries and motors.

Scores of Taiwan companies have also strengthened international competitiveness by providing customized designs and R&D services to international customers. Such outstanding full vehicle manufacturers include Luxgen, All Win Green, Pihsiang, Yulon, Green Jet, and other brands that have carried the Taiwan flag abroad. Taiwan's leading global position and technologies in the ICT industry is bolstered by its "intelligent electric vehicles" that emphasize safety, energy efficiency and comfort as well as their associated value-added applications.

Much of this progress can be seen at EV Taiwan in its "Taiwan EV Pilot Program and Demonstration Area" which displays the latest research results on electric cars, electric motorcycles, electric bicycles, electric scooters, EV batteries, lithium batteries, fuel cells, battery modules, battery chargers, charging stations, motors and parts, motor controllers, automotive DC motors, power systems, and battery test equipment.

#### BUYERS SPUR BUSINESS OPPORTUNITIES

Maximum benefits are offered at this exhibition since TAITRA, the organizer, has mobilized the country's foreign trade and diplomatic missions around the world to encourage motorcycle and EV buyers to come to Taiwan to source their needs. Key buyers have flown in from nations as diverse as Germany, Poland, the Netherlands, China and Indonesia.

Big names from around the world converge here, with such firms as TUCKER ROCKEY DISTRIBUTING and MAXZONE AUTO PARTS CORP. from the US; MOTOCICLETAS Y EQUIPOS



S.A. and ITALIKA MOTOCICLETAS from Mexico; major motorcycle and bicycle wheel manufacturers ENINCO ENGENHARIA INDUSTRIA E COMERCIO LTDA from Brazil; motorcycle parts distributors HERMANN HARTJE KG and major



auto and motorcycle parts and components chain distributor JOHANNES J. MATTHIES GMBH & CO. KG, MAGURA - the GUSTAV MAGENWIRTH GMBH & CO KG and SWARCO GMBH from Germany; AIXAM-MEGA from France; ACERBIS ITALIA SPA from Italy; KL-VARAOSAT OY from Finland; MOTOVELO CORP and CJSC "MOTORCYCLE COMPANY MINSK-MOTO" from Poland.

There is also a major vendor of lithium batteries and battery management systems A1 LIMITED LTD from Bulgaria; the largest motorcycle parts distributors DAYTONA CORP. and the largest bearing manufacturer NTN from Japan. Here too, you can see one of the largest automobile manufacturers MAHINDRA AUTO SECTOR from India; PT.ASTRA KOMPONEN INDONESIA from Indonesia; and MATIN KHODRO ZANJAN CO. from Iran. You can meet any and all at TAITRA-organized one-on-one procurement meetings during the exhibition. CHINA-VEHICLE Source: TAITRA



# EXPECTING THE PROSPERITY OF TAIWAN'S EV INDUSTRY

BY CHINA E-VEHICLE TEAM

**2012** marked the 2nd edition of EV Taiwan, according to TAITRA, the organizer of the event, the exhibitor number almost doubled comparing to 2011. The figure shows the strong growth of the EV industry in Taiwan and meanwhile it also reflects the government's support to this green and promising industry. Taiwan is a traditional fuel-powered motorcycle market, especially scooters, which is also the home of the top scooter makers KYMCO and SYM, both have huge market share in the whole world, especially the former. According to Mr. Huang Zhishu, who is the President of Taiwan Electric Scooter Association, there are over 18 million units of fuel powered motorcycles registered for the time being, and Taiwan's population is roughly 24million people. All of visitors to Taiwan will be amazed by so many scooters in the streets, there is no exception so far yet according to our survey. Of course, this is good for the motorcycle industry, however on the other side, such huge quantity of motorcycles is also telling another truth, CO2 emission will be a grave pressure to the environment.

Taiwan also used to be an EV market years ago, but due to various reasons, the EV industry in Taiwan did not come up to a proper stage like it does as the mainland of China, whose development is quite slow. Surely, there is a lot thing to do with people's life habit, but on the other side, the quality is also one of the reasons, since at that time, most of the e-scooters in Taiwan's street were imported from the mainland, whose technology and quality control was not that strict at that time. Viewing from the booming situation of EV Taiwan 2012, we can feel that it is going through a fast growth. The enthusiasm of both exhibitors and visitors is just like never before. CHINA E-VEHICLE interviewed most of the complete

e-bike makers during the show, most of them but their quality is already abreast more competitive price, which visitors, which is even companies.

There is another may also help booming days fuel price rise. is going price rise electricity

don't built that many units each year, with Japanese products but at a attracting many global truer for the battery

reason which lead to the of EV, the Taiwan through a of fuel, and



1



2



3



4

gas, and this time the price of gasoline and diesel rises over 10%, which is the biggest rise ever since 2008 in Taiwan's history. The administrative government is also blamed harshly by the public for this. On the other side, this will may be good news of the EV industry. Normally, it will welcome a good market

year, which is better than last year and there are just so many people interested in their products.

During the show, there are also some companies bringing their e-car and displaying the e-car driving system, there are also a few e-car battery companies exhibited. Luxgen displayed the Zero Emission SUV, and ACHENSA showed their whole family of their electric cars, while Delta showed visitors their e-driving system and the quick charger worktop. There is still a long way ahead of e-car due to many reasons such as price, range, stability of battery among some other, but starting the initial R&D mean that the first step to success already made.

There is still a long way ahead of Taiwan's EV industry given the market share and brand awareness of the e-scooters and e-motorcycles, but the bright future of electric vehicle industry already booms in this place and the companies here also show their strong competitiveness in the global market. We are expecting the booming exhibition in 2013. CHINA E-VEHICLE

performance by taking the advantage of this period. Many exhibitors told CHINA E-VEHICLE that there are quite a few local distributors asking about their products. Similar things happened to America as well, when there is a considerable fuel price rise, many people will turn their eyes to the green energy vehicles. Taiwan's promising market also attracted complete e-scooter makers from abroad. EEEFUN is Netherland-located e-scooter maker, which is relatively a new member in this industry, and they told CHINA E-VEHICLE that Taiwan will be one of the most promising markets in the world, they brought the whole range of their products to the venue and sought for the proper distributors. DK Life is Taiwanese brand, which builds e-folding bike and e-scooter, whose targeted consumers are middle income group. They also told us their products are very popular this

1.Delta showed visitors their e-driving system and the quick charger worktop  
2.DK Life electric folding bike 3.EEE FUN e-scooter  
4. Luxgen displayed the Zero Emission SUV

# 111

# CANTON FAIR REPORT

## NEW E-BIKES AND E-SCOOTERS RELEASED AT THE SHOW

By Zoe Fu CHINA E-VEHICLE



15th to 19th April marked the 111th issue of Canton Fair. One of the biggest changes of this year is that the buyers from EU countries and America decreased a lot, especially the people from EU which is the best quality market for Chinese EV companies in traditional sense. And the EU market itself is going through big changes right now. Netherland used to be the biggest e-bike market in Europe and whose position is taken over by Germany last year which sold more than 300 thousand units of e-bike in 2011. According to

some buyers and companies, the former biggest e-bike market is also going through an economic difficult time right now, which is not good news for the Chinese companies.

Many exhibitors told CHINA E-VEHICLE one same thing that visitors from South American countries increased a lot, where may become the big booming market for Chinese products in the future. CHINA E-VEHICLE & CHINAMOTOR just attended



Columbia 2-wheeler show in Columbia, where is a huge market for two-wheelers, especially for motorcycles, but during the exhibition, there is one local company displayed e-bike on their booth. This company is also the biggest Chinese motorcycle importer, AKT. The General Manager Mr. Enrique Vargas told us that the Columbia EV market has not started yet due to several reasons, among which the recycling

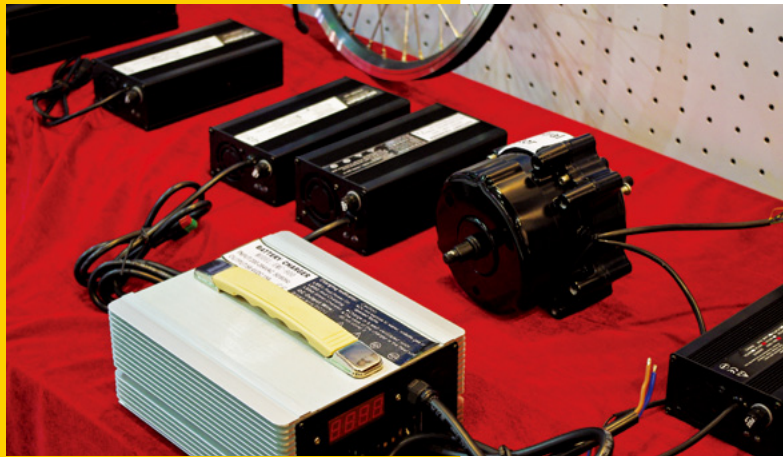


of the battery may be the biggest one, but if the problems can get properly solved, the future can be promising. The situation is similar to quite a few counties in Latin America. But Chinese companies should make a careful and long-term study of the local market before making any market strategies, the tax and governmental regulations toward e-bikes and e-scooter can be varied a lot in different places. Though the European market is

through a difficult time, but the seriously good products are still popular at the show, UGBEST is the e-scooter brand under Zhongneng Group (ZHEN) which is one of the biggest fuel-powered scooter makers in China. According to Ms. Laura, who is the Marketing Manager, "UGBEST" means "You green is the best". ZHEN is a very much reputable brand in China, which is also different from many other Chinese companies, they paid a lot attention to the brand awareness, quality and R&D, right now it is enjoying serious good reputation in the overseas market. CHINA



E-VEHICLE was told this many times while interviewing the global buyers. They did not bring too many samples to the show like many others, but both the two displayed become the spotlight center. Laura also told us that the two displayed e-scooter has attracted big interests among the limited European buyers this time. CHINA E-VEHICLE talked to a lot people both at home and abroad about what is the proper way for the export market, most of them come to the same opinion that strict quality



control and non-compromising R&D will be the best weapon in the future, of course, the smart marketing strategy is a must. But how many Chinese EV companies concentrated on the serious R&D? The number will not be that optimistic.

CHINA E-VEHICLE also learnt that the price battle is still happening in some abroad market, which has been proved a doomed mistake by many Chinese motorcycles companies in many other countries already, but the same ugly thing is still on stage now. Companies just wildly compete for the market share with no sensible sense about the profit and quality. CHINA E-VEHICLE went to EV Taiwan just before Canton Fair,

which is a quite delicate and young exhibition held in Taipei concentrating on EV products, I can feel the strong sense of different attitudes from companies of Taiwan and the mainland toward their product and their market. Taiwan companies have serious standard toward their R&D and their marketing strategy, they are proud of that the quality and reputation of their products are abreast with Japanese, and their profit is also considerable. I interviewed most of the exhibitors in Taiwan, and they are just so proud of their products, and all of the people at the booth can give me very detailed information of their products and the oriented-market. It comes to a serious contrast with many companies in Canton Fair.

After all, there are also some nice e-bikes and e-scooters released during the 111th Canton Fair, we listed a few hereby and hope you will enjoy them! CHINA E-VEHICLE



**Brand:** Zongshen PEM  
**Model:** ZPM2000DQT-2  
**Manufacturer:** Zongshen PEM Power Systems Inc.  
**Website:** www.zongshenpem.com  
**Specifications:**  
 Dimension (mm): 1750\*665\*1110  
 Ground clearance (mm): 105  
 Axle base (mm): 1230  
 Max. speed (Km/h): 45  
 Range (Km): 60 lead acid battery/80 lithium battery  
 E-motor: 2000W hub motor  
 Tyre: F: 100/80-10 R: 120/70-10  
 Brake (F/R): Disc/ Drum



**Brand:** Junma  
**Model:** JM-TDE-0012  
**Manufacturer:** Foshan Junma Technology Development Co., Ltd.  
**Website:** http://gdjunma.en.alibaba.com  
**Specifications:**  
 Dimension: 1700\*650\*1020  
 Frame Material: Aluminum Alloy  
 Motor: Rear motor 180W/200W/240W  
 Brake system (F/R): Disc  
 Tire: 26"\*1.75/1.95 Wheelbase: 1120  
 Power supply: 36V 8Ah lithium battery  
 Range per charge: 40Km

**Brand:** Jonway  
**Model:** MGW-C  
**Manufacturer:** Zhejiang Jonway Motorcycle Manufacturing Co., Ltd.  
**Website:** www.jonway.com  
**Specifications:**  
 Motor (W): 500-1000W  
 Battery: 48V 20Ah silicon battery  
 Tire (F/R): 3.50-10  
 Charger input voltage: 110V-230V  
 Max. speed: 60Km/h  
 Max. range: 50±5Km  
 Brakes (F/R): Disc/disc  
 Brake control: Hand brake



Wheelbase: 1350mm  
 Charging time: 5-6 hours

**Brand:** Sanyou  
**Model:** Elektron(E-73)  
**Manufacturer:** Sanyou Holdings Group Yinyou Motorcycle Co., Ltd.  
**Website:** www.china-sanyou.com  
**Specifications:**  
 Max. speed (Km/h): 100  
 Brake (F/R): Disc/Disc  
 Wheel hub (F/R): Aluminum/ Aluminum  
 Tyre size (F/R):130/60-13/130/60-13  
 Battery type: lithium battery (72V 60Ah)  
 Motor power: 6000W  
 Charge time: 5-6 hours  
 Packing size: 2260\*750\*1160



**Brand:** Jiajue  
**Model:** LILIUM  
**Manufacturer:** Zhejiang Jiajue Motorcycle Manufacturing Co., Ltd.  
**Website:** www.jiajue.com  
**Specifications:**  
 Dimension: 150\*65\*110cm  
 Frame: Alloy (folding)  
 Battery: 24V 8Ah integrated Li-Ion  
 Mileage: 30-40km Charging Time: 5-6h  
 Motor: 24V 250W brushless geared



**Brand:** Yizhe  
**Model:** Electric Folding Bike  
**Manufacturer:** Changzhou Yizhe Vehicle Co., Ltd.  
**Website:** www.yizhe.cc  
**Specifications:**  
 Max. mileage: ≥20Km  
 Battery: lithium  
 Battery capacity: 2.5Kg  
 Motor type: 36V, 250W, brushless



**Brand:** Wangye  
**Model:** Koala-A  
**Manufacturer:** Taizhou Wangye Electric Bicycle Co., Ltd.  
**Website:** www.iemco.cc  
**Specifications:**  
 Motor: 48V 2000W Battery: 48V 56Ah li-ion Charge time: 6 hours  
 Max. speed: 45Km/h Tyre size: F: 3.5-10 R: 3.5-10 Dimension: 1900\*580\*1140mm  
 Brake system: F: disc, hydraulic telescopic absorber R: drum, mechanical



**Brand:** Yadea  
**Model:** YD-EM121 EEC  
**Manufacturer:** Yadea Technical Group Co., Ltd.  
**Website:** www.yadea.com.cn  
**Specifications:**  
 Dimension (L\*W\*H): 1760\*520\*1020mm  
 Brake system (F/R): Disc/Drum  
 Max. speed: 30-50Km/h  
 Range distance per charge (km) : >60Km  
 Total weight (Kg): 98Kg (lead-acid battery); 116Kg (lead-acid battery-1); 87.5 Kg (lithium battery)  
 Motor rating power (W): 800W/1000W/1200W  
 Motor max. power (W): 1200W/1500W/1800W  
 Battery type: 48V/20Ah; lead-acid battery;  
 48V/35Ah; lead-acid battery  
 48V/30Ah; lithium battery



Charging time: 6-8hours (lead-acid battery); 3-6 hours (lithium battery)  
 Tyre size: F: 3.00-10 42J R: 3.00-10 42J

**Brand:** Xinling  
**Model:** XL500DQT-6  
**Manufacturer:** Taizhou Wangye Electric Bicycle Co., Ltd  
**Website:** www.xinlingmotor.cn  
**Specifications:**  
 Motor power: 48V 500W  
 Battery capacity: 48V 10Ah  
 Brake system (F/R): Drum  
 Tire size (F/R): 16\*3.0  
 Speed (Km/h): 30-40  
 Range (Km): 25-35  
 Climbing capacity: 8°-10°



**Brand:** UGBEST  
**Model:** UF4  
**Manufacturer:** Zhejiang Zhongneng Industry Group Co., Ltd.  
**Website:** www.ugbest.com

**Brand:** Aigeni  
**Model:** AF7004  
**Manufacturer:** Aigeni Techonogy Co., Ltd.  
**Website:** http://aigeni.en.alibaba.com  
**Specifications:**  
 Motor: 36V 250W F/D brushless geared motor  
 Battery: 36V 10Ah lithium battery  
 Charge time: 4-6 hours Frame: Alloy 6061  
 Brake: Front V brake, rear roller brake  
 Tire: 700\*38C Gear: Shimano Nexus 7  
 Dimension (packing): 141\*25\*91cm



**Brand:** Haoling  
**Model:** Seagull  
**Manufacturer:** Changzhou Haoling Motorcycle Parts Co., Ltd.  
**Website:** http://czhlclbj.en.alibaba.com  
**Specifications:**  
 Motor: 250w brushless hub motor Range: 70Km (PAS) 35Km  
 Battery: 36V 10Ah Li-Ion Charging time: 4-6 hours  
 Max. speed: 30Km/h Tyres: 26"\*1.95 Brake (F/R): disc/roller brake Shimano

**Specifications:**  
 Battery: Lithium  
 Wheelbase: 1350mm  
 L\*W\*H: 900\*700\*1150mm  
 Braking (F/R): Disc  
 Tire (F/R): 120-70-12  
 Max. speed: 45-55Km/h  
 Range: 80±5Km  
 Charging time: 8-10h  
 Battery type: 60V 36Ah/60V 40Ah



# U.S. Alt-Fuel Vehicle Sales in March

Rising gas prices may not have lifted all alt-fuel vehicles in Feb, but they did a pretty good job for some of the higher profile models.

Overall, U.S. March sales of hybrids, extended-range plug-in hybrids, battery-electrics and diesels jumped about 40 percent from a year earlier as both the Toyota Prius hybrid and Chevrolet Volt extended-range plug-in set all-time monthly sales records. One possibility for the surge is that U.S. customers, beaten down by rising gas prices last year, are now willing to spend the extra money for more fuel-efficient, advanced-powertrain vehicles as gas prices continue to rise.

## THE SALES SURGE WAS LED, OF COURSE, BY THE PRIUS.

The sales surge was led, of course, by the Prius, which moved 28,711 vehicles, up 54 percent from a year earlier. Toyota, in fact, set an all-time U.S. monthly sales record for the Prius, which was introduced here in 2000. Fueling the increase was a combination of a broader range of models – the Prius C compact and Prius V wagon both debuted in the U.S. this year – and 2011 sales figures that were held down by supply constraints stemming from the earthquake and ensuing tsunami that struck Japan last March.

Meanwhile, sales of Toyota's non-Prius vehicles, including the Camry and Highlander, jumped 61 percent from a year earlier to 6,011 vehicles. And, while Toyota didn't break out Camry Hybrid sales, the Camry's overall sales jumped 35 percent from a year earlier to a March-record 42,567 vehicles, hinting that the updated Camry Hybrid that was introduced late last year has been well-received. Sales of hybrids under Toyota's Lexus luxury badge were up 5.8 percent.





As for the Volt, General Motors sold 2,289 units last month, more than triple the Volt's year-earlier sales and beating previous monthly record from December 2011 of 1,529 Volts. With such record sales, GM may shorten the five-week Volt shutdown that started March 19 by a week, and the automaker made good on former GM Vice Chairman Bob Lutz's prediction last month that March would mark record sales for the model. In fact, when factoring in the estimated

2,500 Buick LaCrosses, Buick Regals and Chevrolet Malibus sold with the eAssist mild hybrid powertrains, GM sold almost 4,800 hybrids and plug-in hybrids in March. That's more than the hybrids sold by Ford and Honda combined.

While Nissan Leaf battery-electric vehicle sales weren't as gaudy, they still almost doubled from a year earlier to 579 units.

Since late last year, the average price of regular gas has jumped almost another 60 cents a gallon and is approaching the \$4 mark, according to AAA. Determining how much such gas prices drove up alt-fuel vehicle sales is tough to determine because makers of smaller-production hybrids such as BMW and Mercedes-Benz don't break out hybrid numbers, and Audi didn't break out diesel sales a year ago.

U.S. sales of hybrids, battery-electrics and diesels increased about 38 percent to more than 57,000 vehicles in March.

Still, with most of the alt-fuel market accounted for, U.S. sales of hybrids, battery-electrics and diesels increased about 38 percent to more than 57,000



vehicles in March, with the Prius, as usual, accounting for about half the market. Additionally, Volkswagen's diesel sales appeared to spike from the rising gas prices, jumping 44 percent from a year earlier to 8,452 units.

Toyota, GM, Nissan and VW's alt-fuel sales more than offset continually lagging hybrid sales from Ford and Honda. Ford sold 1,797 hybrids, down 45 percent from a year earlier, and Ford Fusion Hybrid sales dropped 31 percent from a year earlier. Ford Escape Hybrid sales plunged 86 percent.

Honda, who, like Toyota, suffered from supply constraints last year, fared even worse than Ford. Honda's hybrid sales were cut in half from March 2011. While Civic Hybrid sales actually doubled from a year earlier, CR-Z sales dropped 68 percent and sales of the Insight, which was designed to challenge the Prius for hybrid supremacy, plunged 63 percent. Overall, Honda sold 2,475 hybrids, down from 4,908 a year earlier. CHINA-E-VEHICLE  
Source: green.autoblog.com

Company	Vol%	Mar. 12	Mar. 11	Vol%	YTD2012	YTD2011
<b>Ford Motor Company</b>						
Ford Escape Hybrid	-86.44%	162	1,195	-62.51%	941	2,510
Ford Fusion Hybrid	-31.17%	1,009	1,466	-28.42%	2,730	3,814
Lincoln MKZ	1.79%	626	615	-5.94%	1,298	1,380
<b>Ford Motor TOTAL</b>	<b>-45.15%</b>	<b>1,797</b>	<b>3,276</b>	<b>-35.50%</b>	<b>4,969</b>	<b>7,704</b>
<b>Volkswagen</b>						
Volkswagen Diesels	44.00%	8,452	5,869	43.62%	19,754	13,754
<b>General Motors</b>						
Buick Lacrosse/Regal/Chevy Malibu eAssist Hybrid		2,500			4,763	
Chevrolet Volt	276.48%	2,289	608	223.55%	3,915	1,210
<b>GM Total</b>		<b>4,789</b>	<b>608</b>	<b>617.20%</b>	<b>8,678</b>	<b>1,210</b>
<b>Nissan North America</b>						
Nissan Leaf	94.30%	579	298	283.41%	1,733	452
<b>Audi</b>						
A3 TDI	na	361	na	na	1,007	na
Q7 TDI	na	243	na	na	690	na
<b>Audi Diesel Total</b>	<b>na</b>	<b>604</b>	<b>na</b>	<b>na</b>	<b>1,697</b>	<b>na</b>
<b>Toyota Motor Co.</b>						
Toyota Prius	54.32%	28,711	18,605	42.26%	60,859	42,779
All other Toyota hybrids	60.70%	6,011	3,741	64.84%	13,318	8,079
Lexus Hybrids	5.78%	3,493	3,302	39.66%	8,101	5,800
<b>Toyota Motor Total</b>	<b>49.00%</b>	<b>38,215</b>	<b>25,648</b>	<b>45.22%</b>	<b>82,278</b>	<b>56,659</b>
<b>Mitsubishi</b>						
Mitsubishi i	na	52	0	na	136	-
<b>Porsche</b>						
Porsche Cayenne S Hybrid	8.77%	124	114	-13.66%	373	432
Porsche Panamera Hybrid	na	43	0	na	116	-
<b>Porsche Total</b>	<b>46.49%</b>	<b>167</b>	<b>114</b>	<b>13.19%</b>	<b>489</b>	<b>432</b>
<b>American Honda</b>						
Honda Accord Hybrid	na	-	-	na	-	-
Honda Civic Hybrid	105.44%	906	441	28.91%	2,096	1,626
Honda Insight	-62.90%	1,032	2,782	-62.08%	2,297	6,058
Honda FCX Clarity	na	1	-	na	1	-
<b>American Honda Total</b>	<b>-39.84%</b>	<b>1,939</b>	<b>3,223</b>	<b>-49.28%</b>	<b>5,759</b>	<b>11,354</b>

# Acoustic Innovation:

E-SOUND BY AUDI

Audi's future e-tron models will cover long distances powered by practically silent electric motors. To ensure that pedestrians in urban settings will hear them, the brand has developed a synthetic solution: Audi e-sound.

Sound is an especially exciting aspect of a vehicle. Although it can be described in physical terms, there is no substitute for experiencing it firsthand. A car's sound is emotional, not intellectual. Although we consciously register a car's sounds only occasionally while on the road, they are always there – playing a crucial role in the driving experience. Sounds send signals. Low-range frequencies suggest power and composure, while mid-range frequencies emit sportiness and agility.

All Audi models produce sound signatures which are not only well-rounded and harmonious, but also broadcast performance, premium quality and respectability. "Good sound design is a complex endeavor," explains Dr. Ralf Kunkel, Head of Acoustics at Audi. "We have gathered a lot of expertise over the years. We have also learned how to amplify pleasant frequencies and to suppress unpleasant noises."





In a series-production Audi, a combustion engine currently supplies the music. Conversely, the motor in an electric-powered e-tron is not an option, as it is too quiet and its high frequencies are not exactly melodious. Audi's e-tron models will therefore feature a synthetic sound signature. Rudolf Halbmeir teamed up with his colleagues Axel Brombach and Dr. Lars Hinrichsen to create it.

They used computers to do most of the work. Using software to mix and listen to tones, assess, and then re-mix: Halbmeir is truly enthusiastic about the creative process. After all, in his spare time, he writes songs and composes music in his own recording studio – where he himself plays a lot of instruments. "I create one-of-a-kind emotional sound structures," says Halbmeir. "There aren't many differences between music and a vehicle's sound. I trust my instincts and have to try out new ideas to determine where they will take me."

Which ideas, exactly? "Some science-fiction films provided inspiration suitable for certain frequency ranges," responds Halbmeir. "But there was nothing in the real world which offered quite the right sound."

When you compose music or sounds, you have to be true to your convictions. The moment you cut corners, you essentially end up with elevator music." Dr. Ralf Kunkel adds: "Because we here at Audi are all automotive experts, we have a great advantage over sound specialists elsewhere. We know our vehicles inside and out, not to mention how they operate and behave."

The e-sound by Audi may be artificial, but it is authentic. In fact, the



e-tron itself generates its sound by the millisecond. Dr. Lars Hinrichsen, the expert for hardware and software, explains: "Data relating to the electric motor's rotational speed, vehicle speed, loads, and other parameters is continuously supplied by the vehicle to the control unit. It then uses this data to generate sound."

The e-sound is played via a sturdy loudspeaker attached to the car's undercarriage. Axel Brombach, the specialist in this field, shares details: "We designed it to handle as much as 40 watts, but during normal operation it ranges between five and eight watts. That's loud enough for nearby pedestrians and cyclists to hear the e-tron." A fraction of the sound signature enters the vehicle's interior via airborne and structure-borne sound waves. "We could utilize sound paths and mechanical actuators for more sound in the interior," explains Dr. Kunkel. "After all, a vehicle body is basically a large soundboard. But we believe strongly that our e-tron models call for an atmosphere of calm, which best conveys the unique experience of electric driving." CHINA E-VEHICLE

Source: Audi



# 2013 LEXUS ES

In Hybrid Variant



Hybrid cars seem to be making waves in the present with all the talk focused on their low fuel reserves and carbon emissions. Toyota's Prius, the first mass produced hybrid, has set the bar high for hybrid vehicles with the United State's EPA and CARB rating it among the cleanest cars to hit American

roads. Now, the Japanese automaker is working on its luxury Lexus marque to produce the 2013 ES 300h, a hybrid version of its H1 segment.

Toyota seems eager to head the race to produce hybrid and eco friendly cars. With the Lexus ES, the automaker will no doubt further its reputation as being a brand

that cares for the environment. No proper technical details have been released about the ES despite it being unveiled at the recent New York Auto Show. What we do know is that the hybrid sedan weighs 1,660kg, 50kg more than its petrol variant, and measures 4.89 meters in length, 1.82 meters in width and 1.45 meters in height.

The ES runs on a 2.5 liter Atkinson cycle petrol engine and delivers a very satisfying 40mpg or 5.8 liters per 100km. Users can choose from four driving modes of Normal, Sport, EV and Eco. The car incorporates the company's latest design language to look sleek and sophisticated and sports daytime LED lights and an all new Lexus spindle grille. The lengthened wheelbase offers occupants more leg room.

The interior sports a more luxurious look with a 7

inch LCD display, a Remote Touch Interface controller in the center console next to the gearshift, bluetooth audio, backup camera and vehicle info display. Customers can choose from premium semi aniline leather seats or a leather alternative, NuLuxe. New ES models of 2013, including the petrol driven ES350, will offer a one year subscription to the company's OnStar like Enform services, attendant applications and Safety connect. CHINA-E-VEHICLE  
Source: [www.ecofriend.com](http://www.ecofriend.com)

# ANSI RELEASES DETAILED ELECTRIC VEHICLE 'ROADMAP'<sup>DEPLOYMENT</sup>



STANDARDIZATION ROADMAP FOR U.S. ELECTRIC  
VEHICLE DEPLOYMENT RELEASED

ANSI ELECTRIC VEHICLES STANDARDS PANEL  
FACILITATES THE SAFE, MASS ROLLOUT OF EVS AND  
CHARGING INFRASTRUCTURE TO HELP ENABLE EV  
PENETRATION OF THE CONSUMER MARKET



The American National Standards Institute (ANSI) announced on April 23 the release of a Standardization Roadmap for Electric Vehicles – Version 1.0, developed by the Institute's Electric Vehicles Standards Panel (EVSP). The Standardization Roadmap assesses the standards, codes, and regulations, as well as conformance and training programs, needed to facilitate the safe, mass deployment of electric vehicles and charging infrastructure in the United States.

"The roadmap delivers on its promise to pave a smoother road to the large-scale rollout of electric vehicle technology. And from the economic and environmental points of view, the timing couldn't be better," said Jim Matthews, EVSP co-chair and director of technical standards and standards policy at Corning Incorporated. "EVs offer the potential to significantly reduce our nation's dependence on imported oil, create well-paying jobs through the establishment of a broad, domestic EV industry, and reduce on-road vehicular emissions."

Developed by interests in the automotive, electrotechnical, and utilities industries, as well as from standards developing organizations (SDOs) and government, the Standardization Roadmap is intended to:

- © Facilitate the development of a comprehensive, robust, and streamlined standards and conformance landscape for electric vehicles;
- © Maximize the coordination and



harmonization of the standards and conformance environment domestically and with international partners.

Available for free download, the Standardization Roadmap focuses on plug-in electric vehicles – both full battery electric and plug-in hybrids – and the charging infrastructure needed to support them given current range limitations of plug-in EVs on battery power alone. Standardization issues that relate to consumer adoption, including EV safety, affordability, interoperability, performance, and environmental impact, are considered. Support services, including training of emergency first responders, vehicle technicians, electrical installers, and inspectors, as well as education of authorities having jurisdiction, building owners, and consumers, are also addressed.

Targeted toward a broad audience of stakeholders, the Standardization Roadmap identifies standards, codes, and regulations that already exist or that are in development, as well as gaps where new or revised standards are needed, along with related conformance and training programs that respond to those needs. Included are recommendations with prioritized timelines for when standardization should occur, as well as the identification of appropriate SDOs that may be able to do the work. Harmonization efforts already



underway or that may be desirable are also discussed.

The Standardization Roadmap is supplemented by the ANSI EVSP Roadmap Standards Compendium, a searchable spreadsheet which inventories standards that are directly or peripherally related to each issue identified in the roadmap, while also identifying related issues to which the standards potentially apply.

"The release of the Standardization Roadmap for Electric Vehicles – Version 1.0 is a critical step forward in facilitating mass EV deployment in the U.S.," said S. Joe Bhatia, ANSI president and CEO. "This effort relied upon the collaborative work of experts from the public and private sectors and across industries, all focused on the common priority of enabling the EV market to expand and thrive."

Work to develop the Standardization Roadmap began in June 2011 and eventually involved representatives from some 80 leading organizations. The majority of work was carried out electronically via seven working groups focused on energy storage systems, vehicle components, the vehicle-user interface, charging systems, communications, infrastructure installation, and education and training. Two plenary meetings were held to identify issues and refine an initial draft of the roadmap in a face-to-face setting.



Given the dynamic nature of standardization, and as the ANSI EVSP continues to assess the progress of standards and conformance programs and any gaps requiring further discussion, it is envisioned that the Standardization Roadmap will be periodically updated going forward. In this way, it will continue to serve as a living document to help guide, coordinate, and enhance the standards landscape in support of the widespread deployment of EVs and charging infrastructure.

Comments on the content of the roadmap and on next steps for the EVSP can be submitted to [evsp@ansi.org](mailto:evsp@ansi.org), or via a brief online survey.

"All of us stand to gain when we work cooperatively to carve out a vision for EV technology in a way that is effective, efficient, and economically beneficial for U.S. industry and safe and effective for consumers," added Jim Pauley, EVSP co-chair and senior vice president of external affairs and government relations at Schneider Electric. "Version 1.0 of the roadmap does just that, but an ever-evolving technology needs an ever-evolving and coordinated approach. We are excited to continue this important work, and I would encourage anyone who downloads and reads the document to give ANSI their comments and feedback."

### ABOUT EVSP

The ANSI Electric Vehicles Standards Panel (EVSP) is a cross-sector coordinating body whose objective is to foster coordination and collaboration on standardization matters among public and private sector stakeholders to enable the safe, mass deployment of electric vehicles and associated infrastructure in the United States with international coordination, adaptability, and engagement. For more information on the work of the EVSP, visit [www.ansi.org/evsp](http://www.ansi.org/evsp).

### ABOUT ANSI

The American National Standards Institute (ANSI) is a private non-profit organization whose mission is to enhance U.S. global competitiveness and the American quality of life by promoting, facilitating, and safeguarding the integrity of the voluntary standardization and conformity assessment system. Its membership is comprised of businesses, professional societies and trade associations, standards developers, government agencies, and consumer and labor organizations. The Institute represents the diverse interests of more than 125,000 companies and organizations and 3.5 million professionals worldwide. CHINA-E-VEHICLE

Source: ANSI



# BRAMMO Hires

## Lemhouse For Global Marketing

Electric-motorcycle maker Brammo Inc. has hired Ashland City Councilman and former Medford police Lt. Greg Lemhouse to spearhead global fleet development.

Lemhouse's experience in law enforcement, government operations and private business will come into play as Brammo seeks to expand sales.

"My role is to open minds to the advantages of integrating alternative fuels and sustainable technology within government, here in the state and nationally," Lemhouse said. "Not only do I know budgets and purchasing, but I know what police departments need operationally. Also, as an elected official, I know the other side of budget realities, the process and limitations."

Last November, Brammo announced a deal with the Hong Kong police force to outfit its traffic patrols with Enertia Plus LE bikes, and founder Craig Bramscher said he anticipated fleet sales to account for 25 percent of the company's revenue.



"The Hong Kong agreement was a big deal," Lemhouse said. "When a department with the stature of Hong Kong's takes this kind of step, other departments are interested and following what's happening. Research dollars are kind of thin for a lot of departments, and so something like this becomes the first domino."

Lemhouse also is president of the Ashland Emergency Food Bank board and has family business connections. "I speak a language to government officials they can understand," Lemhouse said. "We all want sustainable technology, but we want something that works. You don't want to give away operational performance. It comes down to, 'Do you want clean energy or not?'"

Lemhouse, who left the Medford police force in January, supervised the department's motorcycle unit but was not part of the two-wheel patrol team. "I didn't own a motorcycle before," he said. "But I do now." When



he left the Medford police, he said he was intending to develop a private-security consulting business.

"I'm still working on that," Lemhouse said. "But knowing Brammo, knowing what they do and the outstanding people involved, I have a chance to get involved in bringing real sustainable technology to government. It would have been dumb to pass it up." CHINA-E-VEHICLE  
Source: [www.mailtribune.com](http://www.mailtribune.com)





# TTXGP AND UEM PRESENT 2012 THE ELECTRIC ROAD RACING EC

**U**EM will be the sanctioning body of this season of the TTXGP Euro Championship. The 2012 TTXGP Euro will consist of a total of 3 races across Sweden, Britain and the Netherlands. These three rounds will be supplemented by the two rounds TTXGP will join FIM epower in France and Germany making a total race season of 5 rounds for the Euro championship.

An exciting season is ahead with new racers and promises of technology improvements.

**ROUND 1: FALKENBERG (SWEDEN) MAY 19TH - MAY 20TH**

The 2012 TTXGP Euro Championship opening round will take place at the fastest race circuit in Scandinavian racing, Falkenberg is like a high-speed oval with two fast corners, and a slow corner with a chicane and should provide exciting racing for the TTXGP teams this May. 'A fantastic opportunity to show that motorsport isn't always about noise - it can be exciting and innovating without the problems normally associated with our sport' said Sven Göte Svensson at the Falkenberg Motortrack. Scandinavia is a big potential market for zero carbon technologies and we are excited to be able to present the world's best known and established electric race to this progressive and responsive audience

**ROUND 2: SNETTERTON (GREAT BRITAIN) JULY 7TH - JULY 8TH**

BMCRC races have become a home for TTXGP Euro UK based racers and it's pleased to be running with them once again this year at Snetterton, the Norfolk circuit celebrated both its 60th anniversary and a multi-million pound redevelopment project, which met with rave reviews from both spectators and competitors alike.



**ROUND 3: ASSEN (THE NETHERLANDS) AUGUST 4TH - AUGUST 5TH**

Europe's biggest combined annual racing event at the 'cathedral of motorsports', the TT Circuit Assen. The official and only Dutch round in the TTXGP Euro Championship, Assen will be memorable. With an expected 50.000+ crowd the GAMMA Racing Day organization and TTXGP Euro look set to strengthen their position as the world's leading eGrandPrix venue. This marks the first of a multiyear contract between Gamma racing and TTXGP will see electric racing committed to Assen till 2014.

**THE TWO ROUNDS TTXGP WILL JOIN FIM EPOWER ARE:**

**OSCHERSLEBEN (GER) - FIM ENDURANCE**



**WC 11-12 AUGUST  
LE MANS (FRA) 24 HOURS OF LE MANS - FIM  
ENDURANCE WC 7-8 SEPTEMBER**

These rounds continue the collaboration started in 2012, and signal a positive step in the growth and promotion of electric clean emission road racing. Holding a selection of joint rounds allows the teams the best possible stage to promote the sport, the technology and the future to the next generation of motorsport.

**WORLD FINAL: - DAYTONA 19-21ST OCTOBER**

It's the first time in TTXGP History to bring World Final Race to the USA.

Azhar Hussain, founder and CEO of TTXGP said, "The UEM have been an amazing source of assistance providing invaluable guidance and support since 2010 and we are very happy to have this formal agreement to work together to promote the next generation of road racing and are looking forward to an exciting season as well as building on a successful relationship to grow our sport the next level. "

Vincenzo Mazzi, UEM President, said "We are looking forward to this new European Championship and we are sure that electric racing is going to be an important direction for the future of motorcycling sports". [CHINA-E-VEHICLE](http://www.chinae-vehicle.com)  
Source: [www.egrandprix.com](http://www.egrandprix.com)

# MIC: ELECTRIC MOTORCYCLE TOP SPEED TEST



variety of means for calculating top speed, presenting a challenge for shoppers interested in what an electric bike can really do.

"Some methods used right now may not give an accurate measurement, even under similar test conditions. The more that electric motorcycle makers adopt this protocol, the more it can help buyers who are taking a good look at this emerging segment."



The MIC anticipates that manufacturers will immediately and voluntarily begin using the new protocol. The MIC subcommittee also expects to have this new test procedure adopted by the Society of Automotive Engineers (SAE).

The MIC's Top Speed Test Procedure is based on the European Union test procedure, and sets standards for the many variables involved in determining top speed, such as vehicle equipment, battery charge-discharge cycle, test roadway conditions, rider weight, attire and riding position, and atmospheric conditions such as wind speed, temperature and atmospheric pressure.

The MIC's Electric Vehicle Subcommittee includes more than 15 representatives of on-highway electric motorcycle makers who are currently in various stages of developing electric motorcycles, as well as other industry participants.

**Abe Askenazi** (Chair of Electric Vehicle Subcommittee and Chief Technology Officer at Zero Motorcycles) says: "As more and more electric motorcycles appear on the market, having standards we can all agree on is vital to manufacturers and to our customers."

"The new top speed test procedure is just one of the many standards the subcommittee has already published or is working on."

Besides the test procedure, the subcommittee is addressing a broad scope of issues related to electric vehicles, including public information and education. On Capitol Hill and in state capitals, the MIC's government relations staff monitors and advocates lawmaking that promotes electric vehicle use and ensures that two- and three-wheeled vehicles are included in such legislation. [CHINA-E-VEHICLE](http://www.chinae-vehicle.com)

Source: [www.ultimatemotorcycling.com](http://www.ultimatemotorcycling.com)



## MIC ADOPTS PROTOCOL FOR DETERMINING ELECTRIC MOTORCYCLE TOP SPEED

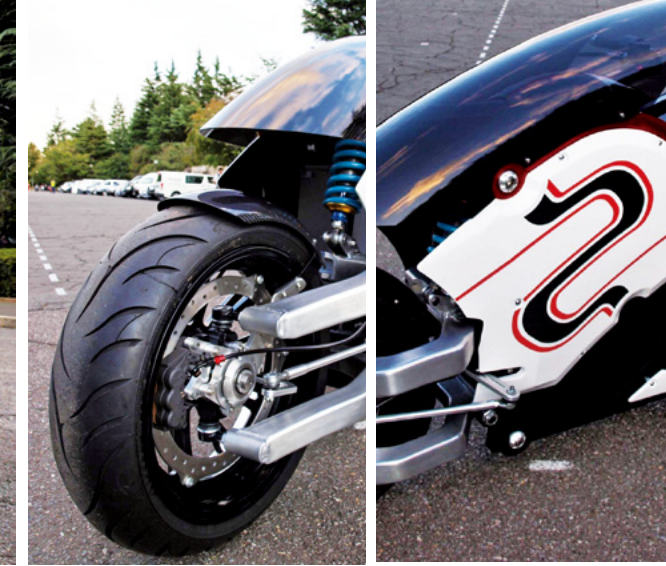
Consumers wanting to compare top speed capabilities among various electric motorcycles will soon find help from a new test procedure developed by the Motorcycle Industry Council.

The Top Speed Test Procedure for Electric Motorcycles, just created by the MIC's Electric Vehicle Subcommittee, establishes standards for determining an electric motorcycle's maximum velocity.

**Tim Buche** (President & CEO of MIC) says: "Manufacturers have used a



# Z AN ELECTRIC MAXI-SCOOTER FROM JAPAN



Electric vehicles are slowly penetrating their way into the commercial automobile market thanks to the numerous unique features offered. Aside from being eco-friendly, most electric vehicles nowadays are performance-based and help cut costs in the long run. One of the latest innovations is the ZeecOO custom e-bike, an electric motorbike with a top speed of 75mph and an overall range that varies between 55 to 85 miles. Introduced by Kota Nezu of Znug Design, the ZeecOO is definitely a looker with its sleek and alien-looking appearance. The motorbike was created along the lines of a futuristic jet fighter and made its debut at the 2012 Tokyo Motorcycle Show.

The ZeecOO is an environment-friendly electric bike that packs in quite a punch considering it runs on an electric charge. All it requires is a charge of between 4-6 hours using a retractable power cord for an overall driving range of 55 to 85 miles. The bike is said to be silent and fast and

offers a smooth ride even with its ultra-low rider styling. For the front suspension, the ZeecOO uses four futuristic-looking extruded gauges to compliment the carbon fiber body.

Kota Nezu of Znug Design has done an awesome job with the finishing and has designed it in such a way that the rider doesn't really need

to bend his back too much while riding. The bike has attracted a lot of attention from the Japanese press and is expected to receive a positive response from bike enthusiasts and experts alike.

The company will introduce a limited edition run of the ZeecOO before deciding on mass production. The custom e-bike will wear a

price tag of \$70,000. However, despite the high price tag, there's a chance that the makers could drop the cost along with boosting its performance if it goes down well with bike enthusiasts. [CHINA-E-VEHICLE](http://www.chinae-vehicle.com)  
Source: [www.ultimatemotorcycling.com](http://www.ultimatemotorcycling.com)

# Designed PEUGEOT E-Bike

FOR YOU AND YOUR  
LAPTOP

Elegance and practicality are a killer combination, and both are abundant in the latest concept from Peugeot. The company's rethinking of the traditional urban bicycle won't suit everyone, but it will almost certainly appeal to enough cyber-serfs to warrant production. The design highlight is the positioning of bike's leather laptop compartment, which is safer for the laptop, and provides a better balanced bike that's nimble and fun to ride. You can even lock the briefcase in place.

The genius of the design is how the location of the leather carrying compartment has relocated the center-of-gravity of the bike/luggage combination

back to roughly where it is when there's no luggage.

Luggage capacity on a bicycle can be carried many ways - predominantly a backpack worn by the rider or a carrier above the rear wheel or on the handlebars. All of those locations are far from ideal for the handling of a light two-wheeler because they put heavy objects a long way from the center-of-gravity. The center-of-gravity is just the average location of the mass of a bicycle, e-bike or scooter. If you make as much of the weight as close to the center-

of-gravity as possible, you can significantly reduce the moment of inertia in pitch, roll and yaw. It's a similar process that Erik Buell went through when he rearranged to components of the motorcycle to such great effect.

of building bicycles, beginning in 1882 and predating its motorcycle and car production which started in 1889. The company's bikes have won the Tour de France 10 times.

A few last thoughts - there has been no price mentioned at this point in time. It is a concept but will probably see production because it is so good. The design really offers a safer bicycle, because the DL122 is maneuverable when loaded, which most bikes are not. [CHINA-E-VEHICLE](http://www.chinae-vehicle.com)  
Source: [www.gizmag.com](http://www.gizmag.com)



A more compact center-of-gravity results in a MUCH better handling two wheeler, regardless of how it is powered.

Having achieved all this so elegantly using non-traditional bicycle materials such as aluminum, wood and leather adds further to the allure of the DL122.

Peugeot has a long and proud history



# Electric NEW Bikes

PROJECT PLANNED FOR THE YORKSHIRE DALES

**TOURISM** businesses in the Yorkshire Dales are being given the chance to join a new project aimed at boosting their takings – using electric bikes.

The Yorkshire Dales National Park Authority (YDNPA) is hoping to launch a Dales Electric Bicycle Network as part of the Dales Integrated Transport Alliance's (DITA) 'Connecting the Dales' project.

And businesses involved in the tourist trade are being asked to consider either becoming locations where cyclists can recharge their batteries – and their bike's as well.

Kath Needham, the YDNPA's Sustainable Tourism Officer, said: "Many people who enjoy cycling but who are not super fit may dismiss biking in the Dales as too challenging.

"But electric bikes are great for 'flattening' hills – giving visitors the chance to choose a green



form of transport on which to enjoy this fantastic but fragile countryside rather than in a car.

“From a business owner’s point of view, hiring out bikes or acting as a charging point can be a great commercial opportunity.

“Following on from successful launches last year in the Lake District and the Peak District national parks, we are now looking to launch the Dales Electric Bicycle Network to cover our National Park and beyond.

“But, for it to be a success, we need to hear from businesses in the Dales who can see the potential and want to know more. “The bikes appear to be a real draw to visitors and if, for example, you offer accommodation, they could be a reason why guests pick your place to stay over others.

‘If you’re a café, being a charge point could attract customers to you who could eat and drink while they charge up their battery for the next stage of their ride.

“For that reason, we’re issuing a call for any local businesses who may be interested to email me at [kath.needham@yorkshiredales.org.uk](mailto:kath.needham@yorkshiredales.org.uk) for more information. “The next stage will be for the Electric Bicycle Network – the company who set up both the national parks projects – to bring a couple of the bikes around the area, in order that those interested can have a go and see what they think. This will also

be a chance for them to ask questions about the scheme.

“Following on from this, we hope there will be enough businesses interested to launch a functioning network by late spring.”

Malcolm Petyt, the YDNPA’s Member Champion for Recreation Management, said: “Electric bikes are an alternative and eco-friendly method of travel in the National Park for people who would otherwise use a car because they

wouldn’t be able to manage pedalling up the hills in our beautiful dales.”

The DITA ‘Connecting the Dales’ project funding extends beyond the Yorkshire Dales National Park boundary, the wider geographical area is contained within Richmond, Bedale, Ripon, Harrogate, Ilkley, Skipton, Settle, Bentham, Kirkby Lonsdale and Kirkby Stephen. CHINA-E-VEHICLE  
Source: [www.thewestmorlandgazette.co.uk](http://www.thewestmorlandgazette.co.uk)

# SPECIALIZED Turbo, THE 'WORLD'S FASTEST' ELECTRIC BIKE



Specialized launched a new bike recently – but it won't be available in the US and perhaps the UK too, because it's too fast!

Three years in development, the € 5,499 Turbo, which is Specialized's first production electric bike, has been designed specifically to be "the fastest and best e-bike ever". However, its top assisted speed of 45km/h (28mph) is 13km/h faster than is allowed under US federal law and 20km/h more than is permitted in the EU\*, including Britain.

In a letter to press and dealers, product manager Marc Faude admitted: "Due to regulatory requirements, there are many markets, including the USA, where the Turbo is simply too fast to be legal."

Key features of the new bike include a 250 watt

rear hub motor, a 342Wh lithium-ion battery that's integrated into the down tube and is said to recharge in just two hours, and carbon fibre Magura MT series disc brakes with a regenerative charging feature.

"You can get an hour on full speed," Ben Delaney, Specialized's global marketing manager said so. "The engineering team has done several 40km rides at top speed on mostly flat terrain."

There's also a wireless handlebar unit that shows power level and battery status, lets you operate the bike's integrated LED lights, and also includes normal bike computer features like speed, time and distance.

Pricing is set at €5,499 and the bike is due to go on sale in limited numbers in May, with further shipments due to arrive throughout the autumn.

Specialized said availability will be limited to "just Europe for now". The first 50 Turbos will be sent to select dealers in April for use as demo bikes.

Faude said: "The Specialized Turbo is a powered performance urban bike, with an integrated electric motor and battery that offers a top assisted speed of 45km/h. Whatever you do, don't call it a pedelec – this is a new category of urban bike that looks, feels and rides unlike any other."

"The most important feature of the new Turbo is its speed – everything about its design, and every engineering decision made during the three years of development, was centered on making this bike the fastest and best e-bike ever. We're confident that we've succeeded. Once you ride one, we think you'll agree."

## SPECIALIZED TURBO SPECIFICATION

- ♣ Frame: Specialized Turbo alloy, integrated down tube battery, internal cable routing, tapered head tube, X12 through-axle rear dropouts, full mudguard/rack mounts
- ♣ Fork: Specialized Turbo custom alloy, tapered steerer, Q15 dropouts, mudguard eyelets and lowrider mounts
- ♣ Handlebar: Specialized flat top riser bar, alloy, 680mm wide, 31.8mm, polished black finish
- ♣ Front brake: Magura MT Carbon hydraulic disc, one-

- piece forged caliper, 180mm Storm rotor
- ♣ Rear brake: Magura MT Carbon hydraulic disc, one-piece forged caliper, 180mm Storm rotor, integrated switch to activate regenerative braking
- ♣ Rear derailleur: SRAM X0, 10-speed, long cage
- ♣ Motor: Specialized Turbo Direct Drive rear hub motor, 250 watt, waterproof connector
- ♣ Battery: Specialized Turbo Integrated down tube battery, self-locking key release, on-board or outside bike charge capable, LED power indicators, start-up diagnostic feature, magnetic connectors, 432Wh capacity
- ♣ Charger: Specialized Turbo quick-charge, magnetic connectors, top-view LED indicator, custom fanless design for total silence, two hours for full charge

\* Under a 2004 European Directive, electric bikes are allowed a maximum assisted speed of 25km/h (15.6mph). However, some European nations have got around this by introducing a 'superbike' class of e-bike that slots in between bicycles and mopeds. For example, Germany's 'leichtmofo' class includes electric bikes capable of assistance up to 45km/h (28mph) and with up to 500 watt motors. A license and insurance is required but not a helmet and the bikes are not allowed on bike paths. [CHINA-E-VEHICLE](http://chinae-vehicle.com)

Source: [www.bikeradar.com](http://www.bikeradar.com)

# GLOBAL Electric Bike SALES

SEEN REACHING 47M BY 2018



With sales expected to reach over 30 million units in 2012, electric bicycles are the world's best-selling electric vehicles. Rapidly accelerating urbanization, the increasing need for low-cost transportation in developing markets, and expanding opportunities for new market entrants are all helping to drive e-bicycle sales. Despite significant business challenges outside the Asia Pacific region, the market for electric bicycles is expected to grow strongly over the next several years. According to a new report from Pike Research, the worldwide market for e-bicycles will increase at a compound annual growth rate (CAGR) of 7.5% between 2012 and 2018, resulting in global sales of more than 47 million vehicles in 2018. China is anticipated to account for 42 million of these e-bicycles that year, giving it 89% of the total world market. The e-bicycle market is anticipated to generate \$6.9 billion in worldwide revenue in 2012, growing to \$11.9 billion in 2018.

Under a more aggressive forecast scenario, worldwide e-bicycle sales could reach 51 million units and \$13.2 billion revenue in 2018, the cleantech market intelligence



firm forecasts.

"E-bicycle manufacturers and importers in North America and Latin America continue to struggle with a weak distribution network and modest demand," says senior analyst Dave Hurst. "As a result, the e-bicycle market is experiencing an accelerated rate of acquisitions and business failures. Nevertheless, sales are expected to grow rapidly, with a



CAGR of nearly 22% in North America from 2012 to 2018."

The vast majority of the e-bicycles sold in China, the world's largest market, utilize sealed lead acid (SLA) batteries. While this has resulted in extremely low-cost e-bicycles in China, it has also led to a number of challenges including e-bicycle traffic congestion, lead contamination, and manufacturers effectively ignoring laws relating to e-bicycles speed and weight limits. Pike Research anticipates that the global penetration of lithium ion (Li-ion) batteries will grow from 6% in 2012 to 12% in 2018. Cost pressures from Asia Pacific will keep manufacturers interested in SLA batteries through this decade, but once manufacturing efficiencies have driven down the costs of Li-ion, we will start to see the decline of SLA as the battery of choice in e-bicycles.

Pike Research's report, "Electric Bicycles", provides a comprehensive analysis of the worldwide e-bicycle and e-bicycle battery industry including an examination of market forces, technology issues, government policy influences, the competitive landscape, and key drivers of growth. The study includes global forecasts for e-bicycle units and e-bicycle batteries through 2017, segmented by world region and key countries. CHINA-VEHICLE

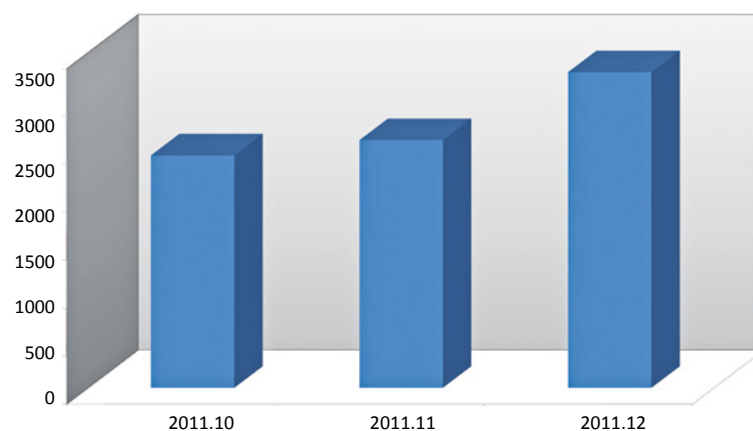
Source: EV Worldwire

# ANALYSIS ON CHINA'S E-BIKE EXPORT IN Q4 OF 2011

## I. TOTAL EXPORTS OF HOME-MADE E-BIKE DOWN SHARPLY IN Q4 FROM THE PREVIOUS QUARTER

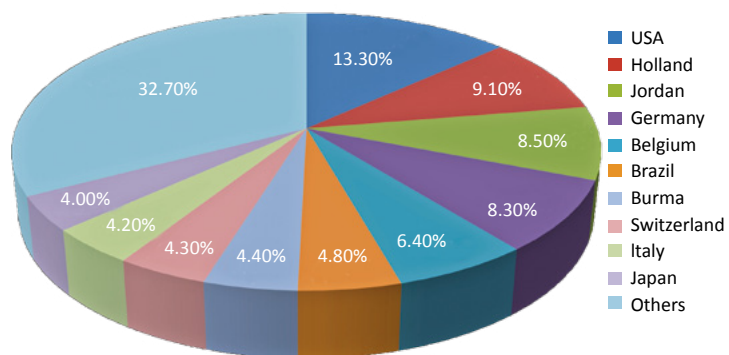
The data indicate that electric bicycle export continued the declining trend in Q4 of 2011 with a total export amount of USD83, 206, 100, down 20% from Q3 and 33% from Q2. However, analysis on the monthly export shows that exports in November and December grew slightly over October, which is as shown in the Figure:

Unit: USD10,000 Export Amount of China's E-bike in Q4 of 2011



## II. DISTRIBUTION OF THE MAJOR EXPORT COUNTRIES IN Q4

Distribution of the Major Export Countries in Q4



According to the data, the USA, Holland, Germany and Belgium, etc. are still the major export countries for China's electric bicycle and seven of China's top ten export markets are European and American developed countries. The United States ranked No. 1 with USD11, 020,000, followed by the bicycle kingdom—Holland with USD7, 580,000. In addition, the performance of the emerging markets were entrancing, especially Jordan which surpassed Germany and ranked among the top 3. China's export amount to Jordan increased from USD3, 380,000 in Q3 to USD7, 090,000 in Q4, showing strong growth force under the background of unsound performance of the overall electric bicycle market. Situation of other export countries is as shown in the following Graph:

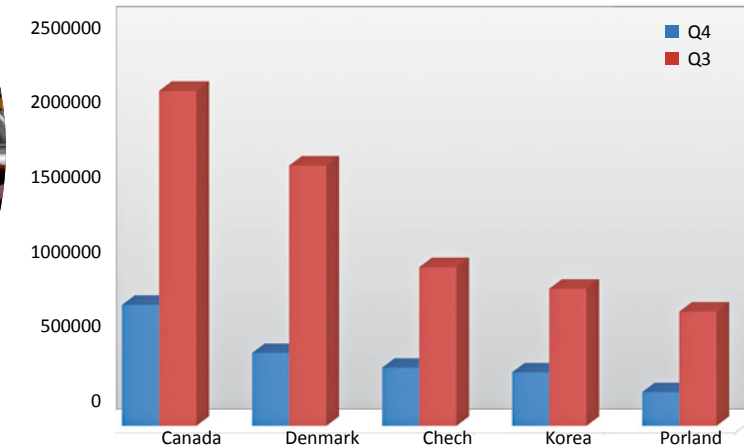
EXPORT AMOUNT OF HOME-MADE E-BIKE IN Q4 OF 2011				
SERIAL NO.	COUNTRY	VOLUME (UNITS)	AMOUNT (USD)	AVERAGE PRICE(USD)
11	SPAIN	7,141	2,353,181.7	329.53
12	UK	19,263	2,253,013.8	116.96
13	AUSTRALIA	4,685	1,682,965	359.22
14	FRANCE	4,949	1,632,610.9	329.89
15	INDIA	5,939	1,527,014.2	257.12
16	TURKEY	4,372	1,350,495.5	308.2
17	DENMARK	2,793	1,254,209	449.05
18	PORTUGAL	2,162	986,684	456.38
19	VIETNAM	3,458	949,335.1	274.53
20	ISRAEL	2,472	866,980.1	350.72

Among these countries, exports to Spain, India, Portugal, Vietnam and Israel all grew over the previous quarter.

## III. TOP 5 COUNTRIES TO WHICH CHINA'S E-BIKE EXPORT AMOUNT DOWN FROM THE PREVIOUS QUARTER



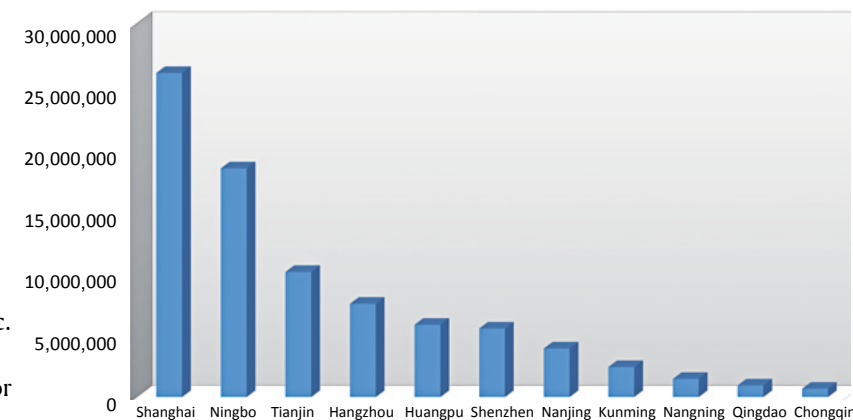
Top 5 Countries to Which China's E-bike Export Amount Down from the Previous Quarter



## IV. EXPORT AMOUNT & RANKING OF CHINA'S MAJOR EXPORT PORTS IN Q4

unit: USD

Export Amount & Ranking of China's Major Export Ports in Q4



According to the data, electric bicycles were mainly exported from Shanghai Port, Ningbo Port and Tianjin Port, etc. in Q4 and exports of the top 5 ports accounted for 81% of the total export amount. From the data, it can be seen that besides the traditional large export ports, export amount of Guangdong displays the outstanding strength of the local area in the field of electric bicycle. CHINA-VEHICLE



# BATTERY SUPPLIERS,

ARE CONVINCED OF EV MARKET'S FUTURE



RENAULT FLUENCE ZE ELECTRIC CAR

Industry insiders on hand here for a battery and fuel-cell technology conference remain guardedly optimistic about the prospects for electric vehicles.

Lithium Energy Japan, the main supplier of lithium-ion batteries to Mitsubishi says recently it will open a second plant, its fourth overall, in Ritto, Shiga prefecture, next spring, creating capacity for an additional 75,000 battery packs for electric cars.

A joint venture between the auto maker and GS Yuasa, Lithium Energy Japan currently has annual capacity for 67,800 battery packs from its three plants, including a 6,800-unit facility in Kusatsu, 11,000-unit operation in Kyoto and 50,000-unit plant in Ritto.

The supplier hopes to produce 50,000 battery packs in

fiscal 2012, says Ryoichi Okuyama, general manager in charge of GS Yuasa's research and development center, up from 18,000 in the current fiscal year ending March 31.

Almost all output is for the Mitsubishi i-MiEV electric car, launched in July 2009, as well as the Peugeot and Citroen spin-offs supplied by the Japanese auto maker.

When the new Ritto plant comes on stream next year, the supplier will have an estimated 2.3 gigawatt hours of production capacity. It also promises to have new customers for the packs, though Okuyama declines to identify the companies.

Blue Energy, a second GS Yuasa JV with Honda, began providing batteries for Civic Hybrids last April from

a plant in Osando outside Kyoto. The supplier has capacity to supply 200,000-300,000 hybrids, equaling 0.25 GWh of energy storage per year.

Honda has sold only 5,000 Civic Hybrids since the model's unveiling at the 2011 New York auto show, with the earthquake and tsunami in Japan last March and flooding in Thailand in October blamed in part for the low volume.

Toyota's Yoshikazu Tanaka, a senior executive in the auto maker's product planning group, says fuel economy would improve 40% worldwide if all conventionally powered, gasoline-fueled cars were replaced with hybrids. "And if we were to replace all hybrids with plug-in hybrids, fuel savings would grow to 70%," he adds.

In developing the Prius Plug-In now hitting the market, Toyota was able to cut Li-ion battery-pack weight 50% and reduce the overall size of the unit 60%, compared with the original design used in prototype vehicles tested in 2010. The new battery weighs just 176 lbs. (80 kg) and stores 4.4 kWh, down from 352 lbs. (160 kg) and 5.2 kWh for the previous unit.

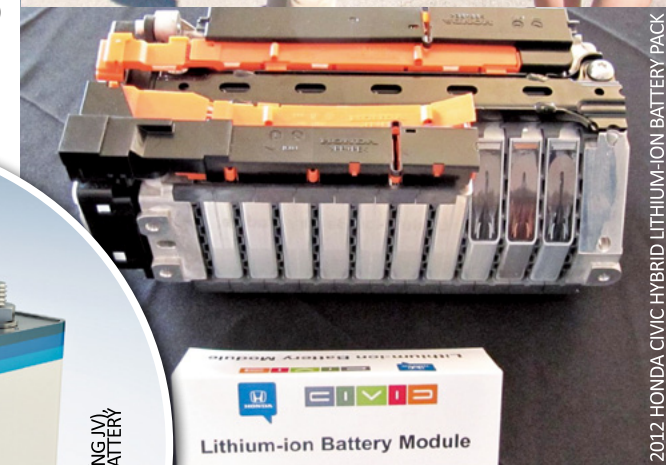
Another Toyota official confirms the next-generation Prius may debut as soon as 2015 and could be a plug-in model only, though no final decision has been made. He estimates plug-ins could account for 30% of total Prius sales by the time the next-gen model arrives.

Toyota signaled its next Prius with the NS4 concept unveiled at the Detroit auto show in January, a car the auto maker said at the time represented its vision for the year 2015.

A senior Nissan executive says his company also is making headway on batteries, saying the cost of the



BYD ELECTRIC BUS



2012 HONDA CIVIC HYBRID LITHIUM-ION BATTERY PACK

Leaf's Li-ion battery pack should come down to ¥50 (\$0.63)/watt-hour in 2013. That would put the cost of the car's 24-kWh battery at ¥1.2 million (\$15,000).

Toshiba Senior Vice President Toshio Masaki predicts automotive demand for Li-ion batteries will grow to ¥3.8 trillion (\$47.5 billion) in 2020, up from ¥350 billion (\$4.4 billion) last year.

The largest segment, an estimated ¥2.2 trillion (\$27.5 billion), will be for EVs and PHEVs. Other segments in Toshiba's forecast include conventional hybrids, electric scooters and hybrid trains.

Toshiba's SCiB battery, which employs lithium-titanate

for its anode material, finds use in Mitsubishi's short-range i-MiEV M and Minicab MiEV and Honda's Fit EV and Ev-neo electric scooter.

Hideo Takeshita, vice president of Tokyo-based Institute of Information Technology, pegs the automotive Li-ion battery market at 56 GWh in 2020, up from 2 GWh in 2011. Against this backdrop, he believes cell prices will fall to ¥10 (\$0.12)/watt-hour, from ¥30 (\$0.38) at present.

On a cell basis, covering all product segments including consumer electronics, IIT reports demand grew to 4.2 billion in 2011, with Samsung SDI claiming the largest share at 24%. Panasonic (including subsidiary Sanyo Electric) was second at 23%, followed by LG Chem (supplier to the Renault Kangoo Z.E. and Fluence Z.E. models launched last year) at 16%.

BYD says it plans to put another 150 electric buses into operation this year, including 100 in Changsha, raising its China market total to more than 350.

BYD Japan President Xueliang Liu says the auto maker is focusing on the public-transport sector, "especially large buses," where it estimates fuel savings of ¥31.4 (\$0.40)/km by switching from diesel to battery power. Over the projected 8-year life of the eBUS-12 electric bus, Liu estimates savings of ¥11.2 million (\$140,000).

The auto maker placed its first three electric buses in



LITHIUM ENERGY JAPAN LEV50 RECHARGEABLE LI-ION BATTERY CELL



MITSUBISHI I-MIEV

trial operation in its home city of Shenzhen in January 2011. In August, it put another 200 in service for the Shenzhen Universiade. During six months of operation, each bus has averaged 156 miles (250 km) per charge with the air-conditioner on. The battery, made of lithium iron phosphate reportedly stores 324 kWh of energy.

In October, Hertz announced it would use a BYD electric bus to shuttle passengers at Los Angeles International Airport. This year, Liu reports BYD will deliver several electric buses to European and Southeast Asian operators. In the passenger-vehicle segment, BYD has leased 350 e6 electric cars to taxi operators in Shenzhen and plans to add 1,000 units this year, although Liu does not specify where the cars would go into service.

The executive estimates savings of ¥7.5 (\$0.09)/km by switching from gasoline to electric power based on average electricity and gas prices of \$0.09/kWh and

\$1.21/L. That equates to a savings of ¥4 million (\$50,000) over five years. As to China's target of 5 million EVs in operation by 2020, Liu calls it a high, but reachable hurdle.

Hyundai says it will begin series production of the ix35 fuel-cell vehicle in 2012 and over the next three years hopes to validate the model in markets outside South Korea. The ix35 features a 10,150-psi (70-MPa) high-pressure tank that can hold 12.6 lbs. (5.7 kg) of hydrogen. The Korean government plans to have 18 hydrogen refueling stations in operation by 2013, 43 by 2015 and 168 by 2020.

In Japan, the Fuel Cell Commercialization Conference, an industry consortium receiving support from the Ministry of Economy, Trade and Industry, plans to establish 1,000 hydrogen fueling stations by 2025, at which time it hopes to have 2 million fuel-cell vehicles in operation.

Source: wardsauto.com www.chinae-vehicle.com 97



# A Professional Motor Maker with Experience of 15 Years

This company is located in Ningbo of Zhejiang province where the mechanical and electric manufacture industry is highly developed. Ningbo Jiangbei Jinhongcheng Electric motor Manufacturing Co., Ltd (hereinafter referred to as Jinhongcheng) is a professional company specializing in R&D, manufacturing and trade of e-bike motors, electric driving and control system. As a model of R&D orienting enterprises of Ningbo, Jinhongcheng is a star company

**Ningbo JiangbeiJinHong Cheng Electric Motor Manufacturing Co., Ltd.**

enjoying high popularity in the regard of e-bike manufacturing both at home and abroad.

In years of exclusive commitment in this regard, it has accumulated sound experience in both R&D and production. Through concerted effort with well-known domestic and abroad institutes, Jinhongcheng has established Driving Technology Research Center and Science and Technology Practicing Base of Huazhong University. Its production has witnessed a considerable growth in the past few years, and it has established industrial chains and bases producing driving and control systems for leisure-oriented three-wheeler e-vehicles, three-wheel electric vehicles for old and disabled people, portable three-wheeler electric vehicles, meanwhile, it is also a professional supplier of e-bike motors and two-wheeler light electric vehicles, which can manufacture products according to the customer's OEM/ODM

requirements. Its product spectrum covers brush-conductor motors, brushless motors, reducing motors, e-bike motors and mating controllers, with an annual production volume of 700,000 units of motors for e-vehicles and over 500,000 sets of premium quality high-power controllers. It has won remarkable market share in this regard and high reputation in both domestic and overseas markets. It is endeavoring to be a leader in the field of high-end driving and control system of e-vehicles.

Jinhongcheng took "Technology innovation, Faithful and Realistic, Respect for Customers and Pursuit for Excellence" as the tenet of their management and the core value of the enterprise. It is looking forward to establishing cooperation with friends involving in the business of e-vehicle all over the world. [WWW.E-VEHICLE.COM](http://WWW.E-VEHICLE.COM)





## Pete

Pete Prebus is the owner of *Electric Bike Report*; a website that provides electric bike reviews, news, & guides, plus e-bike riding & repair tips. See <http://ElectricBikeReport.com> for more information.

# Optibike 1100R Review



on my ride tests as well as the pros and cons of this high end electric bicycle.

### WHAT YOU CAN EXPECT FROM THIS FAST ELECTRIC BIKE!

The Optibike has 2 different performance settings: Fast and Eco. Fast is pretty darn fast (32 mph+ with no pedaling) and it will really fly up the hills. Eco makes this bike more like a normal electric bike (22 mph with no pedaling) and it is slower on the hills but it will give you the most range.

Eco mode makes you feel like you are contributing some power to propel the bike around. Fast mode is so powerful that it was hard to tell whether I was providing much power to help move the bike around!

Caution, this bike has a lot of torque! If you start out in a low gear (easy climbing gear) and you use a lot of the throttle the bike can wheelie and possibly flip over from too much of a wheelie! It is recommended that you start in a mid range gears (7 or 8 on the Rohloff hub) to prevent a wheelie.

While testing these bikes I like to put them through the toughest conditions (using a lot of throttle with little pedaling) to see where the e-bike's bottom line is in regards to range and speed. The Optibike 1100R is throttle only, no pedal assist.

**RANGE:** From the GPS info that I recorded, the bike traveled 22.8 miles and did a total elevation gain/loss of around 2200 ft. in the Fast mode. In the Eco mode the bike traveled 28.5 miles and did a total elevation gain/loss of around 3300 ft.

Considering that I weight 190 lbs and I pedaled very lightly this is pretty good range for a 48 Volt 18 ah

battery pack (875 Watt Hours) under harsh testing conditions.

At the higher speeds, wind resistance will have a big effect on how much energy is used. This is especially true when riding in the Fast mode.

Please keep in mind that if you pedal more, weight less than me, ride slower and/or you use the bike in terrain that is not as hilly you will get more range. These results are from tough testing.

**SPEED:** The Optibike was able to maintain about 32 mph in Fast Mode and 22 mph in Eco mode without pedaling. This bike climbs very well because of it's 1100 watt mid drive motor that allows you to shift the gears and make it easier for you and the motor to climb the hills.

The Eco mode does climb considerably slower than the Fast mode and if you want to feel like you are contributing more power (i.e. getting a workout) then Eco is the best mode for that. Eco mode is also a good for technical trail riding areas because Fast can be too powerful when you want to be moving slower around obstacles.

**WEIGHT:** This bike tips the scales at 60 lbs. which is about right for a bike of this caliber.

The weight distribution on this electric bike is excellent because both the motor and the battery are located in the center of the bike and low to the ground. The low center of gravity is good for the handling; especially for an





off road electric bike like this.

Let's get into the Pros and Cons of this high performance electric bike.

### PROS

Very FAST! Okay all you speed freaks out there, this is the bike for you! The Optibike in the Fast mode could maintain 32+ mph on the flats and it topped out at about 38 mph on slight downhills with just the motor powering the bike. The Optibike also flew up hills in the Fast mode. The Optibike 1100R in Fast mode feels like a lightweight electric motorcycle!

**MID MOUNT MOTOR:** The 1100 watt Motorized Bottom Bracket is nice because it powers through the drivetrain of the bike and can take advantage of using higher or lower gears to optimize it's power and efficiency without getting "bogged down" on a hill. With the power and wide range of gear ratios from the Rohloff 14 speed internal gear hub there really are no limits to the hills that this bike can climb.

The mid mount motor is also great for keeping the weight of the motor in the center of the bike for good handling.

**BATTERY & LOCATION:** The large lithium cobalt

48V 18.2 ah battery pack is positioned low and in the center of the bike. It uses Cool Carbon Technology which positions the individual cells of the pack in a honeycomb matrix to make sure the cells stay cool.

The battery pack is also warranted for 3 years which is a nice perk.

**YOU DON'T HAVE TO PEDAL:** For those days when you truly want the easy ride the Optibike will take care of all the work. The Optibike 1100R has so much power that you can sit back and enjoy the ride. Of course a little pedaling never hurt anyone.

**HIGH QUALITY!** The Optibike 1100R is decked out with some of the highest quality components.



The frame is a monocoque aluminum frame that houses all of the electrical components and it is made in the USA. It has internal cable routing to keep a clean look. Plus, Optibike will make the frame to fit your specifications!

The Fox suspension components, RP23 rear shock and Talas 36 front suspension fork, are high quality parts for sure!

The Rohloff 14 speed internal gear hub is an engineering marvel in its own right. Optibike chose this for the drivetrain because it can handle the 1100 watts of power and Rohloff Speed Hubs are known for lasting a very long time.

The Chris King front hub with 20mm thru axle and Chris King headset are also very high end components.

The Avid Code hydraulic disc brakes provided great stopping power and they have a solid quality feel.

The Mavic 719 Disc rims are well known in the mountain bike world as being high quality.

**PEDALS WELL WITHOUT ASSIST:** The Optibike 1100R pedals pretty well without the motor assistance. Don't get me wrong, this is a heavy bike and it feels like a heavy bike when you are pedaling it without assist, but considering all of that it is not impossible to pedal without power.

**COMFORTABLE BIKE:** The full suspension design provides a very comfortable ride both on and off

the road. The Optibike really benefits from the full suspension when traveling in the Fast mode because it helps you keep both wheels on the ground!

**NICE LIGHTS:** The 10 watt halogen lights are very bright and they run directly off of the battery pack. They are integrated into the display/controls of the Optibike 1100R and they look cool!

**CUSTOM FENDERS:** The custom fenders that match the bike's color are a nice touch and make the bike look a like a motorcycle! The moto look of the bike comes from the owner's (Jim Turner) background in off road motorcycle racing.

### CONS

**Expensive!** The Optibike 1100R that I tested was \$14,384 (USD)! Yes that is an expensive electric bike. This is mainly because the bike is custom made in small quantities in the USA and it uses very high quality components. Therefore this is an electric bike for a select few.

With a price tag like that I would be very nervous about the security of the bike.

**TOO FAST:** Since this bike is so fast and so powerful it relegates it to off road only or getting it registered as a moped or motorcycle. In addition it cannot be ridden on normal hiking and mountain bike trails because it is motorized. You can ride it on motorcycle trails though.

**NOISY:** The Optibike is pretty noisy compared to other electric bikes. You can get an idea of the noise in

the features video above. Maybe this is the price you pay for such a high performance electric bike.

**NO PEDAL ASSIST FEATURE:** I think it would be nice to have a pedal assist option (pedelec) with multiple levels of assistance in addition to the throttle. Since this is such a high end electric bike it would be nice to have the option to make the bike more like a speed pedelec.

**TIRES ARE TOO SKINNY:** The Schwalbe Marathon tires that came on the bike were too skinny for lots of off road riding. If you ride this bike on smooth dirt roads the skinny tires are fine.

**BATTERY REMOVAL:** Removing the battery is not a quick and easy task which is good for security but it is not so good if you want to store and charge only your battery inside. Storing the battery in really cold or hot temperatures can damage the battery. Here is what Optibike recommends:

"Do not store your bike in temperatures below -17C (0F) or above 27C (80F). Prolonged storage outside this temperature range may cause permanent damage to the battery – Keep bike warm and indoors prior to riding for peak performance.

Do NOT charge the battery if it is below 0C (32F) or above 45C (113F). This will cause permanent damage."

Therefore you will want to store your Optibike in a relatively temperate place like a warm garage.

**THROTTLE WAS PLASTIC:** For the price of the Optibike it would be nice to see a metal throttle instead of the plastic throttle. The Rohloff Speed Hub shifter is metal and a matching metal throttle would be a nice touch.

### CONCLUSION

The Optibike 1100R is definitely a unique electric bike! It is pushing the limits of the electric bike world and dabbles in the realm of a lightweight electric off road motorcycle. It is all about high quality and customization to make the bike a perfect fit for you. I appreciate the finer aspects of the components of the bike and it is great to see that you can buy a bike made in the USA, made for you.

If you want a bike that is very fast, powerful, and exudes high quality I would recommend the Optibike

1100R. Just be prepared to pay for it!

Please keep in mind that this is a relatively short term test. This testing can't really give you the long term review of durability and reliability. My thoughts on the quality of this bike are from previous experiences with similar bikes.

Where to get the Optibike 1100R electric bike? Contact Optibike directly to order your custom electric bike.

CHINA-E-VEHICLE





# Opportunities for Cooperation Between Western and Chinese E-Vehicle Companies



The future of electric vehicles – of all sizes – is very bright. But especially bright for electric two wheelers – an industry that China already dominates.

All over the world, humans are moving into bigger and denser cities. More than half of all humans now live in such cities.

This creates a need for cleaner vehicles that take up less roadway and parking. And for vehicles that are quieter and non-polluting. (And a need to avoid the high cost of petroleum

fuels.)

This is true of nearly all the world. And nearly every country has electric vehicle development programs. Many countries use electric bicycles already, in large numbers.

While this need is universal, not many places have the combination of materials, know how, and costs that enable them to build the electric bicycles, motorcycles, cars, trucks, and components that will be necessary to meet this need.

China, due largely to insightful political leadership and policies that encourage electric vehicles, not only has the manufacturing resources to build such vehicles, but also has a large domestic market that creates economies of scale, resulting in low cost, and functional products.

For Western companies that

wish to develop and sell electric bikes, and motorcycles, China is clearly the best place to buy or build such vehicles. Usually this is working with an OEM (Original Equipment Manufacturing) factory like Flying Pigeon, or an ODM (Original Design Manufacturing) factory like Fairly Bike Manufacturing. In China, there are dozens of capable, qualified factories, many of them already supplying Western customers. Hundreds more wish to become capable and find such customers.

Even more important are the many makers of the essential parts for such vehicles – motor makers, battery makers, and the myriad of other parts and pieces needed by manufactures. These exist in abundance in China, offering inexpensive components that are proven in service to the Chinese domestic Market.

To the Chinese company, Western customers are an opportunity to serve a market and customer that will pay a higher price, allow a higher margin than the Domestic China market. And an opportunity to learn how to serve the Western markets.

There is a lot to learn from both sides. While there are endless examples of Western companies successfully buying vehicles and components in China and making money distributing them in their home market – this is not an easy accomplishment for either the Western Company or the Chinese company.

Differences in business style, culture, and language mean that misunderstandings and errors occur constantly. Both sides must keep an open mind and constantly work to reduce and eliminate such errors.

There are several steps to a successful relationship:

1. Get to know each other both as companies and as individuals. Trust starts with good relationships between people on several levels of both companies. The bosses need to know each other well, and believe that they are sincere in their desire to work together successfully. The engineers and sales / buying staff need to have good communications and know who they are working with. Visiting each other's companies is important. As is finding real connections between individuals.
2. Start with a small project or a small order. Learn how each group will work and interact – without huge pressure of a giant order or "must do" situation.
3. Give each other a chance to make money. The Western company that demands the lowest possible price, relentlessly reducing the profits of the Chinese company is not a partner,



but more of a predator. The Chinese company that reduces quality to make more money will kill the business for both companies. Allow each other to make money – for all good business occurs only when both sides are making money and the consumer is happy with the product.

4. Allow time for the relationship to develop. It can take years for the trust and communication to reach the level needed. Trying to rush this rarely works.
5. Western companies are bewildered by the many Chinese companies, and have a hard time deciding or selecting between them. And Chinese companies have a hard time understanding the true situation and capability of Western companies. Get help with this. A consultant, some research on line, talking to the customers and suppliers of each company can help avoid an expensive and time-consuming mistake.
6. Western companies – tell the Chinese supplier EXACTLY what you want in great detail. Chinese companies – when you do not understand or have enough information – ask questions.
7. Different cultures have many differences in ideas. It is common for both Western and Chinese people to be baffled by differences in things that "everyone knows." Ask questions check on every detail.
8. Make plans. And be aware that Western and Chinese people have different ideas about how far in advance to plan and what to plan for. Detailed and careful plans can help a lot. And then know that plans inevitably change.
9. Develop a "back channel" method of communication. This should be a third party that is trusted by both sides. Often problems can be resolved, without confrontation or anger, by having such a mutual friend.
10. Listen carefully to each other. Usually both sides are trying to tell each other exactly what is needed for success to occur. But often the message is lost in translation, or misunderstood, or even more often – understood in a way that is different from what was intended. Always be asking "did I really understand?" and pay attention to clues of action, body language, and the questions and comments from the other side to learn if the message was clearly understood.
11. Be sincere in trying to help each other.
12. If you cannot trust and cannot be sincere, or often misunderstand each other – look for a different partner or situation.

Best of luck and hoping for your success and prosperity.

Edward Benjamin, eCycleElectric.com CHINA-E-VEHICLE



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Marsel



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URANUM





## David's Post Box

The Englishman in China attempts to answer your questions  
Englishmaninchina@gmail.com

Hello and welcome to my monthly EV question and answer session. I have received so many letters that it is not possible to print them all here, but I will reply to you personally if your letter is not published. Because the EV industry is relatively new don't feel afraid to ask questions that you feel may be simple, there's no such thing as a stupid question! Also don't worry if English is not your first language. I receive most of my messages from non Anglophones, I will

proof read and correct your grammar for the column.

Most of the letters that I receive are of a technical nature but I also welcome industry questions. If you are contemplating importing EVs in to your country from China write to me and I will share my knowledge of the industry with you.

Many thanks for your support, on with this month's David says

### Question

How are battery electric vehicles eco friendly?  
I would like at least 3-4 points, thanks

### David says

There are several reasons battery electric vehicles are environmentally friendly, but most of them boil down to one factor - using less energy. When less energy is used, less pollution is generated, and fewer resources are spent.

It's important to realise that nothing manufactured in an industrial setting can be completely clean or harmless to the environment. However, in all our examples, we need only compare to the alternative - gasoline - to realise the improvement that battery vehicles can make. Here are the most important points:

- 1) Less energy. Gasoline requires electricity to refine - about 6 kilowatt-hours per gallon. This is nearly the same amount of electricity battery powered vehicles need to drive the same distance. Since gas vehicles require both electricity and petroleum, and battery vehicles need just electricity - this is the easiest way to prove that electric vehicles use much less energy than gas cars do. Most estimates say about 3 to 5 times less energy.
- 2) Much less pollution. This follows naturally from using less energy. A battery EV can also be made entirely pollution-free by charging from rooftop solar panels or home windmills.
- 3) Less manufacturing input. Electric cars have fewer systems and components than gas cars do. Electric motors have just one moving part, and are much

smaller, lighter, and less complex than gasoline engines. Electric cars also have no exhaust systems, no oil systems, no cooling systems (though some EVs use battery coolers), and also have much simpler transmissions. EVs do have something gas cars don't - a big battery system. But that's not usually enough to offset the reduced manufacturing input of losing those other systems. EVs also have the potential to last longer (because of the high reliability of electric motors), and so fewer cars should get dumped.

4) No oil, coolant or other secondary waste dumped into the environment. Waste motor oil is a significant pollutant that battery vehicles do not require. Of course, some fear that EV batteries could become a new source of pollution. This is unlikely for a couple of reasons. First, EV lithium batteries are full of expensive materials, making recycling highly likely. Second, lithium batteries contain no harmful materials, and are considered safe for municipal waste streams. Third, modern EV batteries have very long lifetimes - Chevy Volt and Nissan Leaf batteries are both warranted for eight years, and Chevy has stated that they expect a lifetime of over 10 years for their EV batteries.

### Question

Are electric cars worth it for the costs?

<http://www.nissanusa.com/leaf-electric-car/index#/leaf-electric-car/index> a car like this for example, can go a decent speed, has enough range for what i need on a day to day level. I'm just curious the price per mile will be worth it in the long run, I'm also to curious to know how long an Electric car would last, my current car is a 1996 dodge stratus with 170,000+ miles, can i expect the same life time for an electric car?

### David says

An electric car is definitely worth it if it matches with your driving style.

If you drive mostly short trips, for example, you could probably do nearly all your miles on an EV. The car will be expensive, but you could make that money back in fuel cost savings.

Cost-per-mile: A car like the Leaf, for example, gets about 3.5 miles per kilowatt hour of electricity. Here in Michigan where I live, there's an off-peak rate of 7 cents per KWH available. That makes the Leaf's energy cost-per-mile just 2 cents, about 6 times cheaper than the cost of gasoline for an economy car.

Durability: In general, electric vehicles are extremely durable.

### Question

Why are electric car batteries not removable?

There have been a lot of new electric cars coming out recently, but we keep hearing about the "range" of the car, as though once you charge up the battery that's it. Most of us have jumper devices we can keep in our non-electric cars that'll recharge our batteries, and it would be a lot more convenient if we could remove the car battery and charge it in our home. We've also had ultra capacitors and other advances in battery and power supply technology for decades that one would think would make this a fairly simple problem.

So what's the limiting factor here? Why do we still have to run power cords out to our cars? And why can't we use solutions that already work with gas powered cars, with electric cars?

### David says

Tesla Motors has talked about battery changing stations in the future. If that becomes reality the range will not be an issue at all and having to replace and maintain your battery should not be either.

Once again thanks for your input, the EV industry is relatively new and you help us to develop it. If I haven't answered you here it's due to space restriction and I will answer you directly to your email address, See you next month

### Question

First electric car invented in the 1800s. Why are they not perfected by now?

It seems like greed is preventing cheap technology from being widely available.

### David says

Batteries!

There are no physical laws that bound the energy density of batteries to being significantly less than that of gasoline.

But we haven't made as much progress as we should have in the 150 years because that's not where the R and D went.

It wasn't until the consumer electronics industry got to the point where they were producing high power products that were supposed to be long lasting and portable (cell phones and lap tops), that the R and D was finally done which found a battery chemistry that would make electric cars viable.

Now it has to be made affordable.

### Question

Enlighten me about electric motors durability and maintenance?

Versus a gas motor

### David says

An electric motor has basically ONE moving part, compared to hundreds of moving parts in a gas engine. Electric motors are designed to be maintenance free.

Think about the electric motor in your refrigerator. It can run for decades with no maintenance whatsoever. Imagine replacing it with a gas engine. Wouldn't that be a nightmare? CHINA-E-VEHICLE



## THE LIGHT ELECTRIC VEHICLE ASSOCIATION (LEVA) ANNOUNCES SPECIAL REDUCED FEE FOR DEALER MEMBERSHIP CATEGORY PLUS 3 MONTH FREE TRIAL

LEVA encourages independent bike dealers (IBDs) and retailers to take advantage of a free three month trial and reduced annual membership fee and join the growing community for electric bikes, scooters and other light electric vehicles.

LEVA represents the strategic interests of light electric vehicle retailers, dealers, distributors, manufacturers and suppliers to promote the development, sale, and use of LEVs worldwide. Members receive support and educational resources to expand their businesses while initiating efforts to influence and adopt legislation, regulation, performance standards, promotion and general best practices in the light electric vehicle industry.

When you join LEVA, you contribute to the LEV industry's combined effort to promote the use of electric bikes, scooters and other light electric vehicles around the world. At Interbike 2011, LEVA managed the electric bike test track, held educational seminars, and hosted its annual networking breakfast. These events brought great opportunities to dealers to learn more about the advantages of adding electric bikes to their product line.

### TOP THREE REASONS TO JOIN LEVA:

1. We're providing services and assistance to light electric vehicle companies by helping to establish a favorable operating environment, by providing a forum for discussion and networking, an industry voice on non-competitive information sharing issues, and to assist in the promotion of LEV business on an international basis. A more favorable operating environment means more people buying LEVs and equipment—and that's good for business.

2. We educate consumers about the advantages of embracing electric technology in terms of better health, a safer environment, and a better environment.

3. The LEVA is a forum for the exchange of business building ideas and strategies for independent bicycle dealers.

All component suppliers, manufacturers, IBDs, distributors, assemblers, wholesalers, retailers, and interested individuals are invited to join. The special membership for IBDs and retailers is \$99. Other member categories and sponsorships can be found on the LEVA website. LEVA has over 190 members from 25 countries.

Dues can be paid via credit card or Pay Pal at (<http://www.levassociation.com/how-to-join-renew>) or contact [sidneyk@levassociation.com](mailto:sidneyk@levassociation.com) for an invoice or wire transfer information. Your name should be on our Member Roster at <http://www.levassociation.com/member-roster/>

Please visit our website: [www.levassociation.com](http://www.levassociation.com)



Educational Seminar



Our Seminar Attendees



Networking Breakfast



E-bike Test Track



Leva Membership



Electric Bikes Worldwide Reports

# ELECTRIC BIKES WORLDWIDE REPORTS

2011 Tenth Edition 30,000,000 LEV 2011 Sales

212 pages with 405 photos & tables of products and technology

by Frank E. Jamerson Ph.D. with Ed Benjamin

Published once every two years with 2012 Update available early 2012

The premier comprehensive source on Light Electric Vehicles, and Four Wheel Electric Vehicles, with product and technology reviews and top executives business analyses

Single Price for EBWR11 with 2012 Update \$595

### Entities that could benefit from EBWR11:

NEW ENTRIES INTO THE LEV BUSINESS: Everything there is to know to make a rationale business decision — marketing advice, current and future sales estimates, product and customer trends, technology analysis, worldwide regulations, Four Wheel EV activity, and solar car and solar bike races.

ELECTRIC BIKE/SCOOTER VENDOR: products and technology, marketing and servicing.

BICYCLE/SCOOTER MANUFACTURER: worldwide market assessments, technology updates.

INVESTMENT AND BUSINESS ANALYSTS: Market history and sales projections.

GOVERNMENT AGENCIES/UNIVERSITIES/LIBRARIES: transportation trends and market growth.

HISTORY: The automobile starting in 1900 was transformational. LEVs starting in 1993 are also transformational, this is a new transportation category.

### EBWR11 Highlights:

- EB/ES sales estimates project a bullish market in most of the seven regions analyzed.
- Plus EB sales for 17 European countries + Pedelec vs. Bottom Bracket Drive usage.
- Emerging markets – Thailand, South Africa, Spain, Israel, Brazil, Philippines.
- Executives of top EB companies, officials from China discuss the future of LEVs.
- Experts in battery and motor technology review those important to LEVs.
- Future of FWEVs and hydrogen Fuel Cell Vehicles have implications for LEVs.
- ES mystery, why are sales slow when Ed Benjamin says ESS will overtake EBs?
- Regulations update reveals rule changes are evolving, except in the USA

### EBWR Customer Comments:

“Electric Bikes Worldwide Reports is packed with valuable data and insights from the most knowledgeable experts in the industry. Unlike many of the newcomers into the category, Dr. Frank Jamerson and Ed Benjamin bring an accurate, sophisticated perspective to the vast amount of activity from electric mobility markets around the globe. The reports are a must read!” by Larry Pizzi - President, Currie Technologies

Frank Jamerson, Ph.D., Electric Battery Bicycle Company, is founder, publisher and author of Electric Bikes Worldwide Reports

EBWR is retired from General Motors Company

Ed Benjamin, currently Managing Director of eCycleElectric LLC.,

Founder and Executive Director of Light Electric Vehicle Association (USA).

For more information please visit: [www.ebwr.com](http://www.ebwr.com)



# eCYCLEELECTRIC - HELPING YOU WITH ELECTRIC BIKES AND SCOOTERS

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www.ecycleelectric.com

Ed Benjamin at ed@ecycleelectric.com for assistance in English.

Vivian Wei at vivian@ecycleelectric.com for assistance in Chinese.



eCycleElectric is Proud to be a Member of the Light Electric Vehicle Association

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This map not to scale (nor is it actual size)



## GLOBAL PROFESSIONAL E-VEHICLE EXHIBITIONS IN 2012 2012年全球专业电动车展会

Exhibition Name 展会名称	Dealer Expo 2012 第45届美国国际机车产品贸易展	Taipei Cycle 2012 2012台北国际自行车展	INA Bike 2012 2012印尼国际汽摩配展览会	EV Taiwan 2012 2012台湾国际电动车展
Time 举办时间	Feb. 17th- Feb. 19th 2月17日-2月19日	Mar. 7th- Mar. 10th 3月7日-3月10日	Mar. 28th- Mar. 31st 3月28日-3月31日	Apr. 12nd- Apr. 15th 4月12日-4月15日
Location 举办地点	Indianapolis, USA 美国, 印第安纳波利斯	Taipei, China Taiwan 中国台湾, 台北	Jakarta, Indonesia 印度尼西亚, 雅加达	Taipei, China Taiwan 中国台湾, 台北
Exhibits Scope 展品范围	Road motorcycle, Off-road motorcycles, Karts, ATVs, Electric motorcycles, Engine, Motorcycle related parts, components and accessories 公路摩托车, 越野摩托车, 卡丁车, 沙滩车, 电动摩托车整车, 摩托车发动机, 各种摩托车零配件及附件	Bicycles, Bicycle related parts, components and accessories, Brake, Bicycle repair tool, Other machinery; Other sporting & leisure goods 自行车, 自行车零配件及附件, 刹车系统, 自行车修理工具, 其他机械, 其他运动休闲用品	Motorcycles, parts, and accessories, Bicycles, LEVs and parts 摩托车及零部件, 自行车及轻型电动车整车及零部件	Electric vehicles, Drive and Motor systems, Energy & recharging infrastructure, Test systems & services 电动车, 驱动与马达系统, 能源与充电站相关设施, 测试系统与服务
Delegation Organizer 组团单位	Beijing Heliview International Exhibition Co., Ltd 北京恒立伟业国际展览有限公司	Hi-Lighting Int'l Exhibition (Beijing) Co., Ltd. 海兰基国际展览(北京)有限公司	Hi-Lighting Int'l Exhibition (Beijing) Co., Ltd. 海兰基国际展览(北京)有限公司	

## GLOBAL PROFESSIONAL E-VEHICLE EXHIBITIONS IN 2012 2012年全球专业电动车展会

Exhibition Name 展会名称	The 111th China Import and Export Fair 111届中国进出口商品交易会	China Cycle 2012 第22届中国国际自行车展览会	Eurobike 2012 2012欧洲国际自行车展览会	Interbike 2012 美国拉斯维加斯国际自行车及零部件展览会
Time 举办时间	Apr. 15th- Apr. 19th 4月15日-4月19日	Apr. 26th- Apr. 29th 4月26日-4月29日	Aug. 29th- Sep. 1st 8月29日-9月1日	Sep. 19th- Sep. 21st 9月19日-9月21日
Location 举办地点	Guangzhou, China 中国, 广州	Shanghai, China 中国, 上海	Friedrichshafen, Germany 德国, 腓德烈斯哈芬	Las Vegas, USA 美国, 拉斯维加斯
Exhibits Scope 展品范围	Bicycles and parts, E-bikes, Motorcycles, Electric scooters, ATVs, Vehicle spare parts 自行车及配件, 电动自行车, 摩托车, 电动踏板车, 沙滩车, 汽车配件	Bicycles and e-bikes, Bicycle and e-bike parts, components and accessories, Bicycle and e-bike equipments, Bicycle related riding supplies 自行车与电动自行车, 自行车与电动自行车零件, 自行车与电动自行车设备, 自行车相关骑行用品	Off-road motorcycles, ATVs, Sport motorcycles, Children's carts, Racing bicycles, E-bikes, Electric tricycles, Electric scooters, Bicycles parts, components and accessories, Auxiliary supplies 越野车, 山地车, 运动车, 童车, 赛车, 电动自行车, 电动三轮车, 电动踏板车, 自行车零件, 相关辅助用品	Motorcycles; Electric motorcycles; Motor vehicles; Mopeds; Motorcycle spare parts; Tyres; Engine and engine module; Electric equipments; Motorcycle manufacturing equipments; Garment and supplies; Care products; Raw materials; Semi-finished products; Lubricants and packaging materials; Motorcycle outdoor supplies 摩托车、电动摩托车、动力车、助动车、摩托车零配件、轮胎、发动机及组件、电动设备、摩托车生产设备、服饰及用品、护理用品、原材料、半成品、润滑油和包装材料、摩托车户外用品
Delegation Organizer 组团单位		Shanghai Xiesheng Exhibition Co., Ltd. 上海协升展览有限公司	Hi-Lighting Int'l Exhibition (Beijing) Co., Ltd. 海兰基国际展览(北京)有限公司	Hi-Lighting Int'l Exhibition (Beijing) Co., Ltd. 海兰基国际展览(北京)有限公司



## GLOBAL PROFESSIONAL E-VEHICLE EXHIBITIONS IN 2012 2012年全球专业电动车展会

Exhibition Name 展会名称	Intermot 2012 2012德国科隆摩托车展	The 112th China Import and Export Fair 112届中国进出口商品交易会	Motorcycle Show Brazil 2012 2012巴西国际摩托车展览会
Time 举办时间	Oct. 3rd- Oct. 7th 10月3日-10月7日	Oct. 15th- Oct. 19th 10月15日-10月19日	Oct. 10月
Location 举办地点	Cologne, Germany 德国, 科隆	Guangzhou, China 中国, 广州	Sao Paulo, Brazil 巴西, 圣保罗
Exhibits Scope 展品范围	Motorcycles, Electric Vehicles, Trailers, Accessories for two-wheeled vehicles, Engines and motors, Electronic equipment, Workshop equipment, supplies, Bicycle accessories 摩托车, 电动车, 拖车, 两轮车配件, 发动机与马达, 电子设备, 生产设备, 用品, 自行车配件	Bicycles, E-bikes, Electric Scooters, Bicycle Parts; Motorcycles, All terrain motorcycles, Vehicle Spare Parts, Vehicles (Outdoor) 自行车, 电动自行车, 电动滑板车, 自行车零配件, 摩托车, 沙滩车, 汽车配件, 车辆 (露天户外)	Motorcycles, Dirt bikes, ATVs, Racing bikes, Electric vehicles, Motorcycle production equipment, testing equipment and maintenance tools, Motorcycle spare parts, supplies and garments 摩托车, 越野摩托车, 沙滩车, 赛车, 电动摩托车, 摩托车生产设备, 检测设备, 维修工具, 摩托车零配件, 用品, 服饰
Delegation Organizer 组团单位	Hi-Lighting Int'l Exhibition (Beijing) Co., Ltd. 海兰基国际展览(北京)有限公司		China Chamber of Commerce for Import & Export of Machinery & Electronic Products 中国机电产品进出口商会

## GLOBAL PROFESSIONAL E-VEHICLE EXHIBITIONS IN 2012 2012年全球专业电动车展会

Exhibition Name 展会名称	Gulf Bike Expo 2012 2012中东迪拜国际两轮车展	EICMA 2012 2012意大利米兰国际摩托车展
Time 举办时间	Oct.18th- Oct. 20th 10月18日-10月20日	Nov. 11月
Location 举办地点	Dubai, UAE 阿联酋, 迪拜	Milan, Italy 意大利, 米兰
Exhibits Scope 展品范围	Motorcycles, Bicycles, E-bikes, Garment, Spare parts and accessories 摩托车整车, 自行车整车, 电动自行车整车, 服饰, 两轮车零配件	Motorcycles, Accessories for two-wheeled Vehicles 摩托车, 两轮车配件
Delegation Organizer 组团单位	Beijing Heliview International Exhibition Co., Ltd 北京恒立伟业国际展览有限公司	Hi-Lighting Int'l Exhibition (Beijing) Co., Ltd. 海兰基国际展览(北京)有限公司

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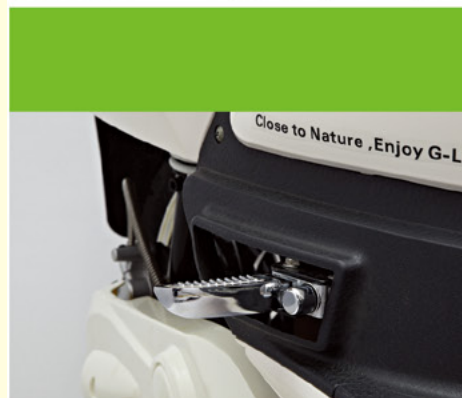
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