



Future Starts From Now





Content

Company Profile	04
BYD Pure Electric Vehicle Technology	06
BYD Dual Mode Hybrid Electric Vehicle Technology	16
BYD Charging Technology	23
BYD New Energy Technology	24



Company Profile

With concerns about rising fossil fuel prices, energy security, and climate change, renewable energy can play a key role in the local production of clean, inexhaustible energy supplementing the world's growing demand for electricity, heat and transportation fuel.

Technology Based, Innovation Oriented.

BYD's motto is "Technology Based, Innovation Oriented." BYD firmly believes that technology can change the world and that innovations can benefit all mankind! In addition to its electric vehicles, BYD has been focusing on cleaner, more efficient alternative energy sources to fulfill the first pillar of its three "Green Dreams" which are: Solar Power, Energy Storage and Electrified Transportation.



BYD Co., Ltd (BYD) is a Hong Kong listed company who specializes in IT products, automobiles, and new energy systems. As the largest rechargeable battery manufacturer in the world, BYD not only has the largest global market share for Nickel-batteries, handset Lithium-ion batteries, cell-phone chargers and keypads, but also has the second largest global market share for cell-phones. In the auto business, BYD has kept a more than 100% annual growth rate for the past 5 years and is a global pioneer in the field of new energy vehicles. In addition to these achievements, BYD has focused on the research, development and manufacturing of a wide range of new energy products, including EV charging facilities, energy storage systems and solar power installations. In 2010, BYD was ranked the top Technology Company in all the world by Bloomberg's Business Week.



BYD Pure Electric Vehicle Technology

Electric vehicles are propelled by one or more electric motors and powered by rechargeable battery packs. Compared to internal combustion engines (ICEs), electric motors have many advantages such as energy efficiency, environmental friendliness, great performance and reduced energy dependence. To help aid the environment and optimize current transportation systems, BYD has been focusing on research and development of EV technologies and recently announced it's "GREEN CITY SOLUTIONS" project. BYD's all-electric vehicle product line includes covers e-Taxi and e-Bus offerings with BYD's e6 and BYD K9 respectively.

GREEN CITY SOLUTIONS

K9



e6



The BYD e6 is a 5-seat crossover EV with a large wheelbase of 111.4 inches. What sets the e6 apart from other electric vehicles is its generous size and comfort. In contrast to the many competitor's electric vehicles on the market, the e6 features a spacious cabin with substantial legroom and headroom for passengers as well as ample luggage space in the rear. Meanwhile, the e6 boasts a powerful drive-train, adopting BYD's revolutionary new EV battery - the Iron-Phosphate or "Fe" battery.



e6 ADVANTAGES

Environmental-friendly

The power unit of e6 uses an Iron-Phosphate or “ Fe” battery, independently developed by BYD. The battery consists of completely biodegradable materials, no toxic electrolytes and no heavy metals, eliminating the recycling problem that has plagued other companies. The e6 is not only zero-direct-emissions, but is also low-noise making huge strides towards solving significant environmental problems around the world.

Safety

Resisting high temperatures, high pressures and severe impacts, the Fe battery boasts excellent reliability. BYD Supplies a 10-year warranty for the Fe battery.

Performance

With a top speed over 87mph (140 Km/hr).

Easy charging

The quick-charging setting can and fully charge the battery in 40 minutes.

Extended Range

The driving range of e6 is over 186 miles, which is the longest range for a pure-electric passenger vehicle in the world.

Economy

The electricity consumption of e6 is less than 20.75kWh/60mile. In the US where commercial electricity may cost around 13 cents/kWh -driving the e6 15,000 miles per year results in annual operating costs of \$672 USD.

0 Emission

zero

15,000 miles


\$ 672

\$

10 Years

⌚

e6



Top Speed

87 mph

⚙️

40 minutes

100%

🔋

186 miles

🚗

e6 TAXI PROJECT

- Starting May 1st, 2010, the first batch of 10 BYD e6 pure electric eTaxis kicked off a trial project in Shenzhen.
- May 17th, 2010, 30 more BYD e6 were delivered to Shenzhen-based Pengcheng Electric Taxi Company, making Shenzhen the first Chinese city to have electric eTaxis in service.
- Sep. 27th, 2010, BYD Ltd celebrated a milestone for 600,000 kilometers (375K miles) of successful e6 eTaxi fleet operations. BYD gathered a lot valuable data from these fleet trials for new model changes.

Model	Estimated MPG	Annual Fuel Cost	Carbon Footprint (tons/yr of CO ₂)
2011 Family Sedan (4 cyl, 2.0L, Manual 5-spd, Regular)	City 23	\$1,571	7.2
	Hwy 30		
e6	Electricity Consumption 20.75kWh/60mile	\$ 672	0

* Based on 45% highway driving, 55% city driving, 15000 annual miles and the price of fuel used by the vehicle.
** assuming renewable energy electricity source.



e6 Specifications

Items	Parameters		
Dimensions & Weight	L/ W/ H(Unload)	4560/1822/1723(mm)	179.5/71.7/67.8(in.)
	F/R Overhang	920/810(mm)	36.2/31.9(in.)
	Wheelbase	2830(mm)	111.4(in.)
	Track(F/R)	1556/1558(mm)	61.3/61.3(in.)
	Min. ground clearance	138(mm)	5.4(in.)
	Min. turning diameter	11(m)	36.1(ft.)
	Curb weight	2295(kg)	5059.6(lb.)
	Tyre	225/65 R17	
Performance	Top speed	140(km/h)	87.0(mph)
Range	Urban range	300(km)	186.4(mi.)
Motor	Max.power	75(kW)	100.6(hp.)
	Max. Torque	450(N · m)	332.0(ft · lb)
Suspension &Steering	Front	Wishbone-type independent suspension	
	Rear	Wishbone-type independent suspension	
	Steering system	EPS	
Recharge System	Quick Charge	Power	100(kW)
		Time	40(min)
	Home Charge	Power	10(kW)
		Time	6(h)

* Actual EV range might vary due to different driving conditions.
All parameters above are for show products only and might vary during commercial launch. All rights reserved.

BYD e-Bus: K9

The K9 pure electric bus is another masterpiece of BYD's in the field of electrified transportation. The K9 is 12 meters long, and the whole design is oriented around ease of customer transport. The specially designed in-wheel drive and the electronically controlled air suspension makes the K9 with low-floor and ample space to allow easy passenger loading and unloading. The front windscreen occupies 2/3 of the front face of the bus for maximum viewing and safety. The silver body with black side windows gives the K9 an elegant exterior, while the interior boasts exquisite adjustable leather seating for driver plus high-quality red and black leather seats for passengers. Carefully engineered sound insulation for a quieter cabin experience.



As BYD's first pure electric bus, the K9 employs many advanced technologies developed by BYD itself. For example, the Fe battery used on K9 is non-polluting, and the chemical materials contained in the battery can be recycled. The solar cells installed on top of K9 can supply more power to supplement the Fe battery. Also, the trip computer on the instrument panel can provide all the service information to the driver to make the driver clear about every working condition while driving.

K9 ADVANTAGES

Environmental-friendly

In addition to the Fe battery, the large solar system on the top of the bus is a supplemental energy source. Compared to other traditional buses, the K9 has very low or no noise pollution when driving.

Economy

The energy consumption of the K9 is less than 100 kWh per 60 miles.

Long range

The K9 is able to run 155 miles on a single charge in urban condition (without solar contribution), more than enough for daily public transportation.

High technology

Braking energy regeneration; in-wheel drive; Fe battery

Easy charging

The K9 can be fully charged in 3 hours or 6 hours with two different chargers.

Ensured safety

Unitary construction body, 4-wheel disc brake, ABS, and ASR deliver passengers with standard safety elements

Human-oriented design

Three passenger doors with low-entry and special footplates for wheelchair access; non-step inside gives the K9 most practical use of space.



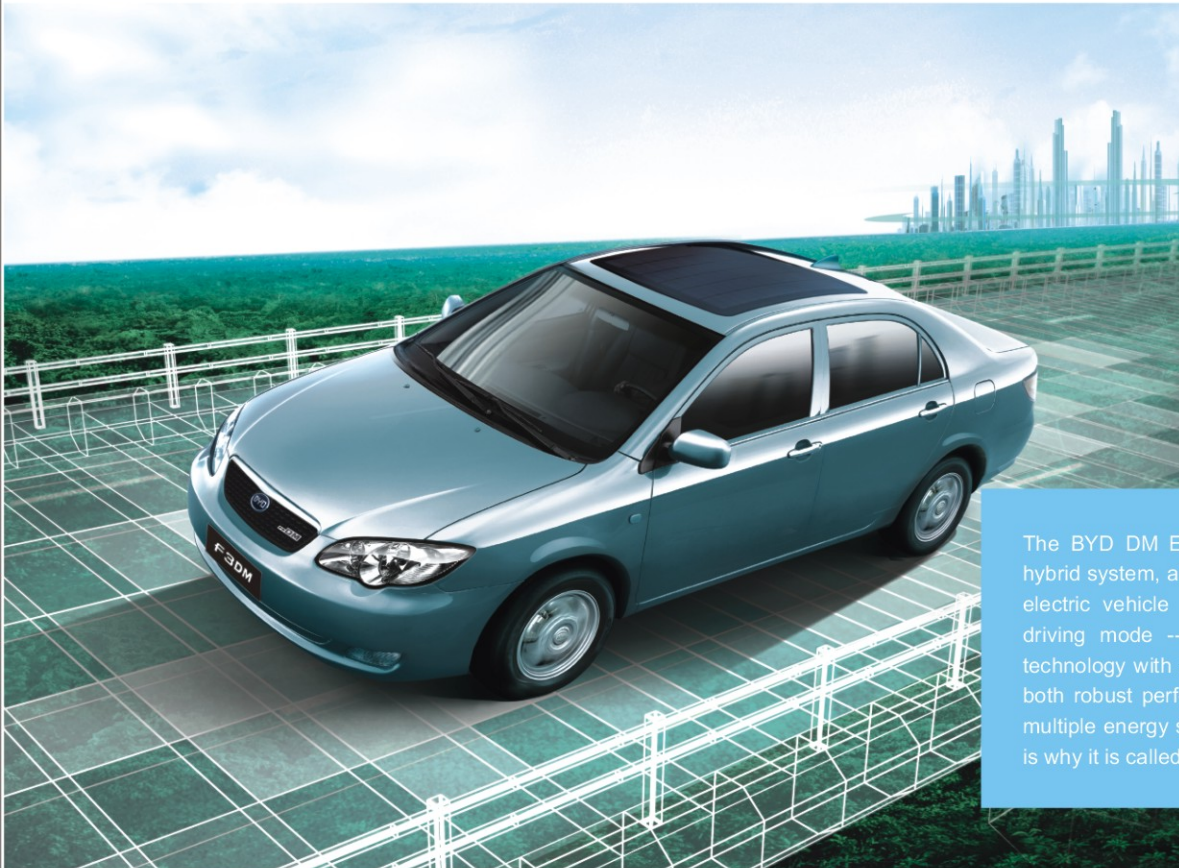


K9 Specifications

Items	Parameters		
Dimensions & Weight	L/ W/ H	12000/2550/3300(mm)	472.4/100.4/129.9(in.)
	F/R Overhang	2450/3350(mm)	96.5/131.9(in.)
	Wheelbase	6200(mm)	244.1(in.)
	Track(F/R)	2096/1838(mm)	82.5/72.4(in.)
	Min. ground clearance	140(mm)	5.5(in.)
	Min. turning diameter	24(m)	78.7(ft.)
	Curb weight	14300(kg)	31526.1(lb.)
	Tyre	275/70 R22.5	
Performance	Top speed	96(km/h)	60.0(mph)
Range	Urban range	250(km)	155.3(mi.)
Suspension &Steering	Front	ECAS	
	Rear	ECAS	
	Steering system	EPS	
Recharge System	Quick Charge	Power	100(kW)
		Time	3(h)
	Normal Charge	Power	50(kW)
		Time	6(h)

* Actual EV range might vary due to different driving conditions.
All parameters above are for show products only and might vary during commercial launch. All rights reserved.

BYD Dual Mode Hybrid Electric Vehicle Technology



BYD has been working to resolve challenges in developing new energy vehicles, including the high cost of battery packs and the limited range of electric vehicles on the market. As a solution, BYD came up with an exclusive Dual Mode (DM) electric vehicle technology that allows users to manually switch to an all-electric mode or switch to a hybrid-electric mode engaging an internal combustion engine. The DM electric vehicles can charge themselves independently with easy connection to a normal household socket and thus never use the ICE engine until a user wishes.

The BYD DM Electric Vehicle system is the next generation of the current hybrid system, and might be the most advanced one in the world. The BYD DM electric vehicle incorporates pure electric driving mode and hybrid electric driving mode -- integrating an advanced generator and motor controlling technology with a 1.0 liter gasoline engine as a range-extender. This provides both robust performance and good fuel economy with low emissions. It uses multiple energy supplies via both grid recharging and gasoline refueling, which is why it is called a dual mode hybrid system.

DM ADVANTAGES

Extended Range

The DM hybrid system uses a high-efficiency Fe battery pack, enabling the BYD F3DM to travel 38 miles solely on electric power, and the extended range can reach 313 miles with a full battery and a full tank.

Safety Guarantee

The Fe battery adopted by DM electric vehicles has been proven safe under extreme conditions such as high temperature, high pressure, and heavy force. It does no harm to the environment, since the Fe battery contains no toxic electrolytes or heavy metals. BYD supplies a 10-year warranty for the Fe battery.

Environmental-friendly & Energy-saving

The DM electric vehicles operate in EV mode without fuel consumption or air pollution.

Convenient Charging

DM vehicles can be charged at a normal household power outlet or a charging pole in a public parking lot. The car can be charged whenever and wherever there is a socket.

313
Miles



10 years

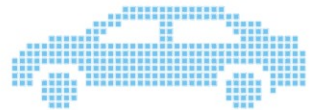


\$2.5 60 miles **\$**

Safety



F3DM



0 Emission
in EV



Home
charge



DM Power



Strong Power

The DM Electric Vehicle System ensures strong acceleration and in HEV-mode the gas engine assists the motor and battery when needed.

Low Operating Expense

The BYD F3DM consumes 16 kWh of electricity power per 60 miles in EV mode. With electricity prices around 15 cents/kWh, the operating expense of the F3DM in EV mode is \$2.50 USD per 60 miles, only 1/5th that of an average gasoline powered vehicle.



On Dec. 15, 2008, the BYD F3DM was launched as the world's first mass-produced Dual Mode electric vehicle. Sales began in China to fleet markets, making hybrid automobiles affordable in as well as highly desirable.

On March 29, 2010, an BYD F3DM with an innovative solar panel charging system on the sunroof, opened for sales to retail customers for the price of approx. \$29,800 USD (before subsidy or incentive). The subsidized price in some China Cities has reached \$10,800 USD making this the most affordable EV on the market.



F3DM Specifications

Items		Parameters	
Dimensions & Weight	L/ W/ H(Unload)	4533/1705/1520(mm)	178.5/67.1/59.8(in.)
	Wheelbase	2600(mm)	102.4(in.)
	Fuel tank capacity	38(L)	10.0(gal.)
	Tyre	205/60 R16	
Performance	Top speed	≥ 150(km/h)	≥93.2(mph)
	Gradeability (%)	30	
Range	EV Range	≥60(km)	≥38.0(mi.)
Motor	Motor type	Permanent-magnet type synchronous motor	
	Generator Max.power	25(kW)	33.5(hp.)
	Motor Max.power	50(kW)	67.0(hp.)
	Max. Torque	400(N · m)	295.0(ft · lb)
Engine	Engine model	BYD371QA	
	Displacement	0.998(L)	
	Max. Power	50(kW)	67.0(hp.)
	Max. Torque	90(N.m)	66.4(ft · lb)
Suspension &Steering	Front	McPherson strut type	
	Rear	Torsion beam type	
	Steering system	EPS	
Recharge System	Home charge	Power	2(kw)
		Time	8(h)

* Actual EV range might vary due to different driving conditions.
All parameters above are for show products only and might vary during commercial launch. All rights reserved.

S6DM

The BYD S6DM is the world's first independent 4WD dual mode electric SUV traveling over 38 miles purely on electric power and with 310 miles starting with a full electric charge and a full tank of gasoline. It features an environmentally friendly 2.0L gas engine, a 10 kW electric motor (M1) paired with a smooth 6-speed dual-clutch transmission propels the front wheels. A 75kW electric motor (M2) powers the rear wheels. The S6DM is estimated to provide 34 mpg on the EPA test cycle.

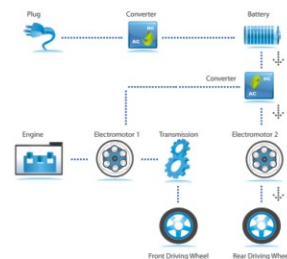


S6DM Specifications

Items		Parameters	
Dimensions & Weight	L/ W/ H (Unload)	4810/1855/1725(mm)	189.4/73.0/67.9(in.)
	Wheelbase	2715(mm)	106.9(in.)
	Fuel tank capacity	45(L)	11.9(gal.)
	Tyre	225/65 R17	
Performance	Top speed	≥180(km/h)	≥111.8(mph)
Range	EV Range	≥60(km)	≥38.0(mi.)
Motor	Motor type	Permanent-magnet type synchronous motor	
	Max.power	85(kW)	114.0(hp.)
	Max. Torque	450(N · m)	332.0(ft · lb)
Engine	Engine model	BYD483QB	
	Displacement	1.998(L)	
	Max. Power	103(kW)	138.1(hp.)
	Max. Torque	186(N.m)	137.2(ft · lb)
Suspension &Steering	Front	McPherson strut type	
	Rear	McPherson strut type	
	Steering system	EPS	
Recharge System	Home charge	Power	2(kW)
		Time	8(h)

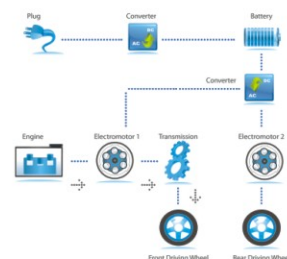
* Actual EV range might vary due to different driving conditions.
All parameters above are for show products only and might vary during commercial launch. All rights reserved.

Three Driving Modes of S6DM



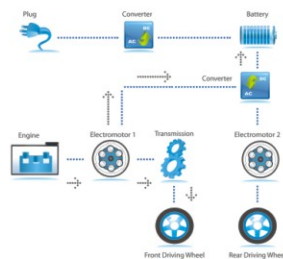
PEV:

At normal speed, the vehicle can operate in all electric mode, with drive from the electric motor (M2) at the rear wheels.



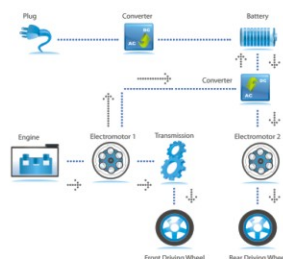
GAS:

When driving on the highway or in case the battery pack is out of work, the engine can power the vehicle solely.

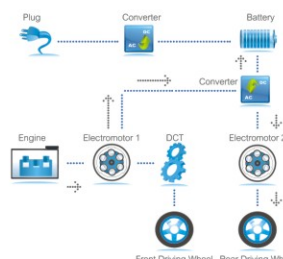


HEV:

2WD: The gas engine not only powers the vehicle directly, but also drives the electric motor (M1) at the front wheels to charge the battery pack.



4WD: When more power is needed, the gas engine and the electric motor (M2) power the vehicle together. If the accumulated power is much enough, the gas engine will also drive electric motor (M1) to charge the battery pack. As speed increases, the gasoline engine can take over seamlessly with support from the 6-speed DCT; when braking, the gas engine automatically shuts down and the electric motor (M2) takes over.



2WD: When the battery power is low while the driving power need is low as well, the gas engine drives the electric motor (M1) to charge the battery pack and the electric motor (M2) powers the vehicle solely.

BYD Charging Technology

To further promote the commercialization and popularity of electric vehicles, BYD strives to be a one-stop green solution supplier, focusing on EV charging technology.



BYD has developed several different charging facilities to meet various World standards

Household and Community Charging Poles

The output voltage of the 2.2 kW charging pole is 240V AC and the output current is 10A. The 3.3 kW charging pole has the same output voltage while the output current increases to 15A. Both charging poles are suitable for charging the F3DM or the S6DM.

Charging Cabinets

The output voltage of the 10 kW e6 charging cabinet is 360V DC and the output current is 30A. The 100 kW charging cabinet has the same output voltage while the output current increases to 300A. For the charging of the K9 e-Bus, the 50kW K9 charging cabinet has the output voltage of 550V DC and the output current reaching 90A. The 100kW K9 charging cabinet has the same output voltage but the output current increases to 180A.

In 2010, BYD worked with China Southern Power Grid and Pengcheng Electric Taxi Co., Ltd to build the EV charging stations and complete the distribution, layout of monitoring network of the charging stations and other charging facilities.



Three Green Dreams

Solar Power

Energy Storage

Electrified Transportation

Beyond its electric vehicles, BYD has been focusing on cleaner, more efficient alternative energy systems to fulfill the comprehensive dream of a ZERO-Emissions Eco-system for our homes and work places.

BYD believes that we can complete this goal of a ZERO-Emissions Eco-system with mass-market-adoption of products from our three “Green Dreams” which include Solar Power, Energy Storage and Electrified Transportation.

Solar Power

Silicon is the most readily available non-metallic element on the face of the earth and iron is the largest metallic element on earth. Solar energy radiating from the sun is practically inexhaustible. Accordingly, BYD has been researching how to harness these near-endless energy sources. BYD builds solar cells from unique Silicon reserves and creates high-efficiency UL and CEC photovoltaic (PV) solar panels, Solar-shaded Parking structures, Solar-powered-street lamps, mobile phone chargers, and other products. The main components include:

Solar Cell: 156P (polycrystalline silicon, 156 mm x 156 mm)



PV Module

Series of BYD 130P6-18

Series of BYD 220P6-30

Series of BYD 220P6-30

Energy Storage System

BYD uses the earth’s most readily available resource of iron to create a low-cost, earth-friendly, battery chemistry called Iron-Phosphate or “Fe” Batteries. BYD’s Fe Energy Storage System makes full use of BYD’s vertically integrated technologies.

BYD’s Energy Storage Systems can balance the output from wind and solar sources making a “firm-capacity” delivered to the grid. Only with storage, do these renewable resources become relevant to the grid.

The Energy Storage Station can also improve power quality, increase the proportion of on-grid power and enhance the security of the electric grid. BYD’s Energy Storage System can enable the development of a truly efficient smart grid.



The BYD Energy Storage System can be applied in the following ways:

- Factories, enterprises and business centers with large load fluctuation
- Power stations with the need for a "black start"
- Solar, wind or tidal power station with fluctuation of power quality
- Nuclear and wind energy generation facilities with the need of storing energy at night for daytime use.
- Small-scale fire peaking power stations limited by environmental problems or the region with high-pollution power plant
- Temporary large outdoor load centers.

Energy Saving Technology: BYD Lighting

Saving Energy is not a dream, BYD has already accomplished the “life-time” LED light bulb and is ramping in mass production.

Indoor Application Products

LED Ceiling Lamp Series

LED Bulb

LED Tube

LED Tunnel Lamp

LED Spot Light



Outdoor Application Products

LED Streetlamp

Solar-LED Streetlamp

LED Package Products

High Power Series

Flash Series

Snap LED



