

AutoNation

—An Industry Hits Hyper Speed in Hybrid Mode

■ Market Perspective by Lowell Bennett

China's auto industry punches it.

The China boom has brought to an expanding segment of the populace increased prosperity, greater personal mobility, rocketing levels of new car ownership and some massive headaches. Development and economic growth in urban areas has come on fast and frantic. And while few wish for a return to the old days, some over the age of 30 may contemplate the packed smoggy streets of Beijing and feel a twinge of nostalgia for a time when their nation was known as "The Bicycle Kingdom."

But there is no going back. The expanding white collar and professional classes are ever more dependent upon personal transport, and the demand for automobiles is fast on the rise. This while China's leaders focus their concerned attention on slowing the accelerating consumption of petroleum and decreasing pollution.

Ironically, while some of the world's more advanced nations make worse their addiction to oil by relying on outmoded and entrenched corporate mindsets—of the sort that produced Detroit's now largely disdained gas-guzzling dinosaurs and mass layoffs—in playing catch-up China may have a unique opportunity to remake the world of automobiles.

A Vehicular Leap Forward

Just two short decades ago, if a sedan was seen negotiating through the throngs of bicycles swarming Beijing's streets, that car was likely the property of the state, and an official mode of transport.

After the founding of the PRC in 1949, it was nearly a half century before Beijing registered 1 million cars and trucks. Now, just seven years later, there are more than 2.6 million vehicles traversing the hazy roads of the nation's capital. In 2005 about 1,000 more were being added each day, reports Liu Xiaoming, of the Beijing Transportation Committee. And according to Beijing University's China Center for Economic Research, in this city of 14 million people about 40 percent of households plan to buy a car within the next five years.

Nationwide, at the close of 2005 there were 23.65 million private cars on the road, up 22 percent from 2004, according to the



This is where it all began. The first car, first rolling in 1886, is exhibited in Beijing during the Benz Classic Car Expo in January, 2006.

National Bureau of Statistics. And in 2005 China's volume of new car production hit 5.7 million units, and sales came in at 5.75 million units, an annual supply and demand increase of 12.56 and 13.54 percent, respectively, according to the China Automotive Industry Association (CAIA).

Adding in the 160,000 vehicles that were imported pushes the nation's total 2005 sales to 5.92 million units, comprising a total market dynamic surpassing Japan to become second only to the United States. In 2006, CAIA projects that market growth will average out at 10 to 15 percent and hit about 6.4 to 6.6 million units.

And so the story is pretty much the same in all of China's major metropolises: Traffic is bad and smog is worse. Certainly the government is pouring everything it's got into increasing fuel efficiency, developing new

technology and reducing pollution. But the simple fact is: This advancing nation of 1.3 billion is the world's fastest growing automotive market. And there is enormous demand to satisfy.

Strategic Short Cut

To answer increasing demand for more efficient and more sophisticated engines, and to become a full-fledged player on the world stage of automakers, an alliance of government and private industry is set to acquire a state-of-the-art engine production plant. (That's *acquire*, not construct.)

If the deal is finalized as expected, China's Lifan Group will disassemble the plant, ship the pieces 8,300 miles from its current location, Brazil, and reassemble the



A Toyota "I-unit" concept car at the Auto Shanghai 2005 Exhibition.

parts in Chongqing, in China's southwest. If operations commence as expected in 2008, China will have leapfrogged perhaps decades ahead in the production of advanced automotive technology.

At a development cost of \$500 million, in the late 1990s the cutting-edge plant was built in the south of Brazil as part of a now soon-to-expire joint venture by and between Chrysler and BMW. Its product is the 16-valve, 1.6-liter Tritec, one of the most advanced and fuel efficient engines in the world.

Once up and running, after focusing on the Asia market, in 2008 Lifan's founder and CEO, Yin Mingshan, expects to export to the EU, branching to the US market in 2009. Quoted in the *New York Times*, Yin said, "Chairman Mao taught us: if you can win then fight the war, if you cannot win, then



Soon to hit the roads in an insatiable market. by imaginechina



A Beijing parking lot filled with late-model cars. by imaginechina

run away,” he said. “I want to train my army in these smaller markets, and when we are ready, we will move on to bigger markets.”

Yin faces some competition on the home front. At the close of February 2006 Dongfeng Honda Automobile Co., Ltd., a joint venture of Honda and China’s Dongfeng Motor Group Co., Ltd., completed a 2.8 billion-yuan expansion of its factory in Wuhan, Hubei Province. Annual production capacity was quadrupled from 30,000 to 120,000 units.

Indicative of another national trend, greater concern for the environment, the plant will operate under the “Green Factory” principal, with care for both the natural environment surrounding the plant and the work environment inside the plant, according to company officials. Efforts include the introduction of a new water-based paint system to limit emission of hazardous substances; promotion of purification and recycling of wastewater; and reduction of electricity, gas and water use through improved efficiency in the manufacturing processes.

In coming months Dongfeng Honda will begin production of the Civic, the famously fuel-efficient vehicle that has realized cumulative worldwide sales of 16 million units. Already, sales of CR-Vs rolling off the production line reached 26,244 units in 2005.

Mandating More Miles

China has in place some of the world’s strictest fuel-efficiency requirements.

As of July 2005, all new-model passenger cars and SUVs weighing less than 3.5 tons that are manufactured or imported to China were required to meet more stringent minimum fuel efficiency requirements. An SUV weighing up to 2,400 kilograms (5,300 pounds) must meet or exceed 100 kilometers per 15.5 liters of gas (15.5 miles per gallon). In 2008, the requirement rises to 100 kilometers per 14 liters (17 mpg). A one-ton car is today required to meet or exceed 100 kilometers per 8.2 liters (29 mpg), and in 2008 that requirement rises to 100 kilometers per seven liters (33 mpg).

Energy efficient transportation is a key part of China’s 11th Five-Year Program (2006 to 2010) and a large part of the overall goal is transitioning government logistical operations, mass transit and Chinese families into energy efficient vehicles.

The government has invested more than 1 billion yuan (\$120 million) into “green vehicle” research, with 22 technical standards established for the production of electric passenger cars. Already on the nation’s roads are more than 200,000 alternative fuel vehicles, and more are coming.

The market is evolving and evolving fast, according to He Dongquan, an authority on transportation with the Energy Foundation in Beijing. “There’s a controversy about ‘Green GDP’ and how to grow ... China is in a transition where everyone’s mind is changing.”

High Gear Hybrids

Perhaps most promising for the near future, offering a way to cut pollution and fuel consumption both by about 30 percent, hybrid technology is coming on strong and seems poised to appreciably impact the market.

At the start of 2006, one player already in the game, Hangzhou-based GEELY Automobile Holding Corp., began constructing its hybrid plant in Xiangtan, Hunan Province.



This electrically-powered car represents one small step towards the much broader goals of the 863 Program, part of China’s drive to higher and cleaner technology. by imaginechina



Wuhan, Hubei Province—China’s first generation of hybrid buses formally enters service.

The company expects to roll its first car off the assembly line by early next year. Initial annual capacity is projected at 50,000, reaching 100,000 hybrid vehicles by the end of 2010.

Meanwhile, Sichuan FAW Toyota Motor Co., a joint-venture between Toyota and FAW, began assembling the Prius hybrid in China in December 2005. The company seems confident that a strong market demand awaits their relatively pricier product. The market price per Prius will be about 288,000 to 302,000 yuan (about \$36,000-\$38,000), and they expect to sell about 3,000 units in 2006.

Other major players are either planning to get into the hybrid game or have production lines already in the works. In addition to the aforementioned, these include Chery Automobile Corp., Chang’an Automobile Group, Shanghai Maple Automobile Corp., Shanghai General Motors, and Shanghai Volkswagen.

According to Wan Gang, head of a team of government-sponsored experts that focus on advancing hybrid automobile technology, China’s makers of cars, trucks and buses will turn increasingly to hybrid technology. And those already in the game are paving the way.

“These firms have formed China’s first hybrid automobile production base,” Wan said.

The Beautified Bus

And yet, while the car market seems to roll on at high speed, Beijing is sending signals that things may be getting a bit out of hand. The leadership’s long term plan leans more to moving the nation’s commuters into mass transit—cleaner mass transit.

In advance of the 2008 Olympic Games, Beijing’s city managers plan to ditch thousands of older buses in their municipal transit fleet and replace them with greener vehicles, some of which will run on clean-burning compressed natural gas. Beijing’s Vice Mayor, Ji Lin, told *China Daily* that there will be 5,000 of the natural gas buses on the city’s street by 2008.

And already on the streets of Wuhan, the capital city of Hubei Province, is a trial fleet of 20 hybrid-electric buses, designed and manufactured by DFM. China’s FAW Group Corporation (FAW) is also producing hybrid buses.

And in the coastal city of Yantai, Shandong Province, a high-capacity electric bus

plant is now under construction. After a phase-1 capital outlay of 250 million yuan (\$30.9 million), the factory is expected to be fully operational in 2006, according to the higher-ups at China-Rising Motors Tech Zone Co., Ltd. Annual production capacity is projected at 12,000 units, with a gross revenue estimate of 15 billion yuan (\$1.9 billion).

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The sooner fuel-frugal cleaner cars, cleaner buses, and pollution-free vehicles can hit the roads of China, the better. One does need not be an expert to realize the obvious: The world’s supply of crude is dwindling and oil-addicted nations will become increasingly testy about cornering their share.

Meanwhile (according to the experts), on the hazy big-city streets of “The Bicycle Kingdom,” it is estimated that standard internal combustion vehicles belch out at least 60 percent of the vaporized brew that is this nation’s smog. 