

China plans five-year leap forward of railway development

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Powerful engine pulled passenger compartments for the first time into Lhasa, the remote capital of Southwest China's Tibet Autonomous Region, on July 2. The train had traveled along the 1,956-km Qinghai-Tibet Railway at a speed of 120 km per hour to conquer the "roof of the world".

The maiden train run on the world's most elevated tracks, 5,072 meters above the sea level at one point and more than 4,000 meters above the sea level for 960 kilometers, was hailed as an engineering marvel in world railway history and a dream-come-true for China's railway constructors.

But for Chinese railway planners, this is only the beginning of a new five-year drive to modernize the country's railway transportation systems that serve one fifth of the world's population.

Ambitious plans

China's Minister of Railways Liu Zhijun says that in the five years from now to 2010, China will build 19,800 kilometers of new railway lines, modernize 15,000 kilometers of existing railway lines, boost passenger train speed to 200 km per hour with fast trains traveling at more than 300 km an hour, and increase the load of freight trains with a single engine hauling over 5,000 tons.

Under the railway development plan approved by the Chinese government, every year 4,000 kilometers of new tracks will be laid, 3,000 kilometers of existing tracks electrified, and more fast passenger trains, including the maglev trains, and large capacity freight trains introduced.

Liu says he hopes that by 2010, China's railway networks will be able to carry 30 percent more passengers and 30 percent more freight to alleviate the heavy demand for railway transportation.

As a developing country, China relies heavily on railways -- the cheapest means of mass transportation. Statistics show that in China, the energy consumption ratio of transportation by air, road and railways is 11:8:1. So at present, the transportation of 75 percent of coal, 66 percent of ore, 62 percent of iron and steel, as well as 56 percent of grain is done by the railways in the country.

China now has 75,000 kilometers of railways, with 6,500 kilometers built in the last five years. China's economy has been developing at an annual rate of more than 9 percent on average, but the length of its railways grows at a much slower speed, with a mere 9.5 percent increase in five years.

"We have been using 6 percent of the world's operational railways to move 23 percent of the total people and freight transported by the world's railway systems each year," Liu says.

Speed raises

To increase railway transportation capacity, China has continuously increased the speed of both its passenger and freight trains. Since 1997, China has raised its train speed for five times, boosting passenger train speed on 22,100 km of tracks to 120 km/hr, on 14,000 km of tracks to 160 km/hr and on 5,370 km of tracks to 200 km/hr. The speed of freight trains on the above-mentioned tracks has also been raised to 120 km/hr.

Before the speed raises, China's trains used to travel at 60 km/hr.

Liu says that the fifth speed raising launched in 2004 alone has increased the passenger and freight transportation capacity of China's railway networks by 18.5 percent and 15 percent, respectively.

China is now preparing for the sixth train speed raising. He Wuhua, chief engineer with the Ministry of Railways, said the target of the sixth speed raising, scheduled to take place this year, is to extend the tracks that accommodate trains running at 200 km/hr by 6,000 kilometers.

In the next five years, Liu says, China will further raise the speed of passenger trains to 200 km/hr on another 13,000 km of the existing rail tracks, in addition to building dedicated lines to passenger trains. He adds that the speed of freight trains on all tracks will be raised to 120 km/hr by 2010.

Despite repeated speed raises, the transportation capacity of China's railways still lags far behind the need of the country's booming economy.

According to statistics released by Chinese Railways, a trade magazine, passenger trains in China provide only 2.41 million seats but sell 3.05 million tickets a day (4.2 million tickets at peak days), leaving many passengers no choice but to stand in the aisles; railway transportation authorities can provide 110,000 freight cars a day, but the nation's daily average demand for freight cars is 280,000,