

# China Development Forum 2021

## *China on a New Journey of Modernisation*

21:40-22:40 20 March 2021

### Panel Session 7 – Venue III

#### The New Revolution in the Automobile Industry

##### Moderator

Zhang Jiwei, Editor in Chief, Caixin.com

##### Speakers

Ouyang Minggao, Academician, Chinese Academy of Sciences; Professor, Tsinghua University

Jennifer Scanlon, President & CEO, UL Inc.

Zhang Yongwei, Vice President, Secretary-General and Chief Expert, China EV100

Yang Haoyong, CEO, CARS

##### Key points

- NEVs embody three revolutions – "low carbon, new energy and intelligence" – that are shaping a new, more extensive industry chain worth tens of trillions of RMB .
- 2020 was the first year NEVs entered Chinese families' consciousness. The industry has gradually transformed from being subsidy-driven to market-oriented, as demand for NEVs in cities without purchasing restrictions grew substantially. Electric cars are expected to hit mass adoption in China by 2030, with ownership reaching 80 million units.
- As we approach the goals of carbon neutrality and peak carbon, it will not be a long before NEVs become truly environment-friendly by using electricity entirely from clean sources.
- ICT technologies such as software and semiconductors will replace traditional gearboxes and engines and become a focus of the auto industry chain.
- As e-commerce infrastructure improves and consumption concepts change, e-commerce will be an irresistible trend in the automotive sector.

## Synopsis

Ouyang Minggao outlined the industrial reforms underway in the auto industry from a macro perspective. He believes NEVs embody three technological changes that are unprecedented in the development of the auto industry.

First, the electrification of power systems. Lithium batteries sets off a once-in-a-century revolution and brought NEVs into our lives. In the coming 10 to 15 years, NEVs are expected to reach mass adoption with ownership of 100 million units. As NEVs gain a dominant position in the market, the comprehensive electrification of urban transport will also advance.

Second, the low carbon revolution. Available NEVs are not NEVs in the real sense, as the electricity they use is not entirely from clean energy. As we approach the goals of carbon neutrality and peak carbon, NEVs are likely to achieve the goal of using only new energy.

Finally, intelligent revolution. Since hundreds of millions of NEVs are scattered across China, IoT and blockchain technologies are needed to connect them, making vehicles the largest form of intelligent terminals.

It is unprecedented to have three revolutions focused on a single product, according to Minggao. These revolutions will break industry boundaries, expand the industry to tens of trillions of RMB, and change the economic landscape, people's lifestyles and enterprises' organizational structures.

Zhang Yongwei clarified two major traits of auto industry reform from the industry and micro perspectives and addressed three aspects of change in the sector.

First, the boundaries of the industry have expanded to intersect deeply with the energy, IT, telecommunications and semiconductor industries, forming new industry chains. The auto industry will make up a larger proportion of China's industry mix and the national economy, demonstrating its important position.

Second, the industry chain will switch focus from engines and gearboxes to electrification and intelligence. China's NEV ownership is expected to reach 80 million units by 2030, shaping the world's largest NEV industry chain. There will be listed NEV enterprises with operating revenue in the hundreds of billions in RMB, even in a market exceeding RMB1 trillion. For example, the semiconductor components of a single car are now worth just USD700 to USD800, but if L4 unmanned driving is realized, their value will exceed USD2, 000.

Finally, globalization will be strengthened. The world's top 10 OEMs and automobile component manufacturers have entered China, which for almost half of them is now their largest market. Globalization means they need to build closer connections with China's market and industry chain, or it will be impossible to maintain their advantages.

The second trait is the rise of emerging auto sector players. These include internet enterprises, many of which have entered the auto industry and are playing vital roles in leading electrification.

The next major players are information and telecommunication companies. As we have entered the age of chip- and software-defined vehicles, where calculation capability determining success, information technology enterprises with innovative genes and a client-focus are becoming dominant powers.

The third group are new manufacturing companies. The auto industry, just like the mobile phone industry before it, will enter a new era dominated by OEMs. An auto company will not necessarily have manufacturing capability. Professional manufacturers will play important roles in improving product quality.

Then there are new operators. They will enrich the auto industry by introducing innovative business models, including charging and services provider swaps, hydrogen energy, vehicle data and IOV operators, regional battery operation companies and car trading platforms. These new forces have entered the auto industry rapidly to become an endogenous force, and will become the leading drivers of industry reforms in the coming three to five years.

Yang Haoyong discussed changes in the nature of car distribution and sales. In his view, as e-commerce infrastructure improves and consumption concepts change, e-commerce will be an irresistible trend in car market. People born in the 1990s and 2000s have become major car buyers and are increasingly willing to buy cars through online channels. Besides, e-commerce platforms have changed the traditional car distribution market using their technologies and data. For instance, by leveraging AI and big data, the space and time restrictions of traditional distribution networks have been broken, car consumption has been extended and marketing efficiency has improved. Therefore, e-commerce car distribution can reach the lower-tier markets in third- and fourth-tier cities, and even rural areas, that traditional new car distribution networks barely cover.



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