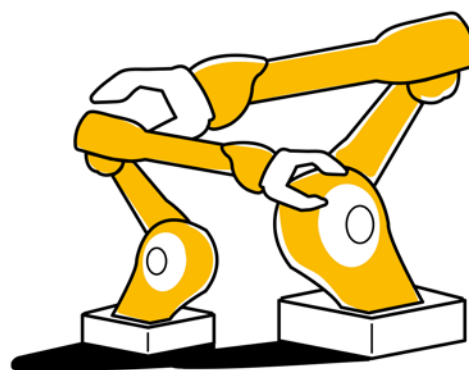


APRIL 6, 2022 (REPORTING PERIOD: FEBRUARY 23 - MARCH 29)

MERICS

China Industries



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MERICS TOP 5

1. Long-term innovation plan to propel transportation industry up the value chain

At a glance: The Ministry of Transport and the Ministry of Science and Technology (MOST) published a blueprint to spur on innovation in transport over the period 2021–2035. The government intends to enhance basic research and fully integrate cutting edge technologies into the transport system. The top priority tasks presented in the plan are:

- Improve infrastructure construction and maintenance, including in areas like super-long span bridges, submerged floating tunnels, and high-speed/heavy-duty railways
- Enhance the domestic production in key transport equipment, for example through research into power transmission systems
- Develop indigenous core components such as high-power ship turbochargers and automotive-grade chips
- Accelerate the adoption of smart technology to enhance transport efficiency, passenger safety and logistics quality

MERICS comment: The policy lays out clear ambitions for manufacturing in China's transport industries. Beijing has previously leveraged industrial policy to successfully develop several mobility sectors, from new energy vehicles (NEVs) to commercial ships. The government now aspires to move into higher-value segments, such as intelligent connected vehicles (ICVs), cruise ships, large civil aircraft and heavy-duty helicopters. Support for research into new technologies related to ultra-high-speed commercial aircraft and trains, and even flying cars, suggests policymakers aim to gain a first-mover advantage in these emerging fields.

Foreign firms continue to play an important role in the development of these industries, either as a supplier of core components, like in aerospace, or as a driver of innovation. For instance [Rolls Royce](#) and [Mercedes-Benz](#) recently established new research and development (R&D) centers in China related to turbine engines and automated driving respectively. While foreign companies may benefit from the local innovation system, they struggle to [access public funding and grants](#) for R&D issued by the Chinese government.

Initially, China's efforts to develop national champions in new segments will assist local players to gain domestic market share. But the ultimate goal will be to develop these into export industries. Beijing has previously achieved this with companies like CRRC and CRSC in high-speed rail and is now making headway in NEV exports through companies such as Nio and SAIC motors. This will increase competition for foreign firms in third markets.

Article: Medium and Long-Term Plan for the Development of Science and Technology Innovation in Transport (2021-2035) (交通运输部 科学技术部关于印发《交通领域科技创新中长期发展规划纲要（2021—2035年）》的通知) ([Link](#))

Issuing bodies: MOT, MOST

Date: March 25, 2022

2. NDRC charts gradual rise for China's hydrogen industry

At a glance: The National Development and Reform Commission (NDRC) released a long-term plan for the development of China's hydrogen industry through to 2035. The document emphasizes hydrogen's importance for decarbonization, technological self-reliance and as an emerging technology. The main goals outlined include:

- Increase innovation capacity, master core technology and manufacturing processes, promote international cooperation with industry leaders
- Scale up and commercialize hydrogen technologies in the transport, energy storage, power and industrial sectors, particularly in the metallurgy and chemical industries
- Produce 100,000–200,000 tons of hydrogen from renewable energy (i.e., green hydrogen) each year and deploy 50,000 fuel cell electric vehicles (FCEVs) with associated refueling stations by 2025
- Significantly raise the proportion of green hydrogen in energy consumption by 2035

MERICS comment: Although the NDRC's plan confirms the role hydrogen will play in China's transition to a low carbon economy, it sets very conservative targets for scaling up green hydrogen output and the roll out of FCEVs. [Industry insiders](#) estimate that China's existing green hydrogen production capacity has already reached 100,000 tons. By 2025, the number of FCEVs in China is expected to reach [about 100,000](#) vehicles. Rather than spur on additional investment, the long-term plan attempts to better coordinate the proliferation of local level policies. About [30 local governments](#) mentioned hydrogen in their 14th Five-Year Plans (FYP) and over 50 cities have issued policies to grow their local hydrogen industry. Policymakers are wary of unsuitable and wasted investment, as often occurs in government supported industries.

European firms have a competitive advantage in hydrogen related technology right along the value chain, from the electrolyzers used to produce green hydrogen, to transport and storage technology, to end use applications in the transport, chemical and metal industries. Although China views hydrogen as an important emerging technology, its commitment to a gradual transition means European players will likely maintain their edge over Chinese competitors for the foreseeable future. Beyond export opportunities, the hydrogen policy's call to increase international cooperation with industry leaders mean European firms can expect to be sought after partners in joint R&D activities.

Article: Medium and Long-Term Plan for the Development of the Hydrogen Energy Industry (2021-2035) (氢能产业发展中长期规划 (2021-2035 年)) ([Link](#))

Issuing body: NDRC

Date: March 23, 2022

3. China stimulates tech diversification to meet energy storage needs

At a glance: The NDRC and National Energy Administration (NEA) jointly published the 14th FYP for new energy storage (excluding pumped hydropower). The plan aims to drive forward China's energy storage capacities through various technologies, to ensure a secure and stable energy supply. By 2030, China anticipates being a world-leader in core energy storage technologies and equipment. Concrete targets set for 2025 include:

- Advance electrochemical energy storage (i.e., battery) technology, reduce related storage system costs by at least 30 percent, and conduct research on sodium-ion, novel lithium-ion, lead-carbon and redox flow batteries
- Develop applications for new energy storage systems which are compatible with conventional energy sources such as thermal and nuclear energy, for example a 100 megawatt compressed air energy storage system
- Achieve breakthroughs in long-term energy storage technologies, such as hydrogen and thermal (cold) energy storage

MERICS comment: China is embarking on a massive scaling up of storage capacity alongside the expansion of renewable energy installations. Last year, the [NDRC and NEA announced](#) China will install over 30 gigawatts (GW) of new energy storage by 2025, up from 3.3 GW in 2020. The new plan lays out a diversified technology pathway to reach this goal, including not only batteries, but also pumped steam storage, flywheels, hydrogen and ammonia. The policy will assist local governments as they encourage or mandate energy storage projects. Several [provinces](#) already require renewable energy project developers to invest in energy storage equivalent to 10 to 30 percent of generation capacity.

China's battery champions like CATL will be the main beneficiaries of added investment into battery related R&D. If electrochemical energy storage system costs do drop by 30 percent, this could significantly boost their international competitiveness. Yet as the global economy electrifies, access to relevant raw materials could present challenges. To avoid putting all its eggs in one basket, China is promoting R&D into a wide range of emerging energy storage solutions and launching related pilot projects. For example, in China's Shandong province, a [salt cave compressed air](#) energy storage system is currently being built.

Article: 14th Five-Year Plan for New Energy Storage Development Implementation Plan (国家发展改革委国家能源局关于印发《“十四五”新型储能发展实施方案》的通知) ([Link](#))

Issuing bodies: NDRC, NEA

Date: March 21, 2022

4. MIIT prioritizes level three autonomous driving and battery swapping standardization

At a glance: The Ministry of Industry and Information Technology (MIIT) issued its top priorities for automotive standardization work in 2022. The list signals which automotive technologies the Chinese government wants to support in the short- and mid-term. Key standardization topics for this year include:

- Accelerate standard-setting in emerging fields (including NEVs, ICVs, automotive electronics and chips) to foster industrial upgrading
- Formulate draft standards for innovative technologies, including requirements for level three (L3, where the car drives itself under certain circumstances) and above autonomous driving and battery swapping
- Promote the global adoption of Chinese automotive standards through the Belt and Road Initiative and active participation in international standard setting organizations

MERICS comment: By throwing political weight and resources behind standardization, China wants to achieve two primary goals. The first is to fuel innovation by aiding the commercialization of new technologies. In the automotive sector this is particularly relevant for technologies including battery swapping and autonomous driving, where interoperability and safety issues are paramount — L3 autonomous driving standardization was mentioned among the top priorities for the first time ever. The second key goal is to establish Chinese standards as the international norm, thus increasing the competitiveness of local firms.

China's approach to standardization — despite reform efforts — remains highly state-driven. While standard setting technical committees and working groups, staffed with relevant enterprises and industry associations, write the standards, MIIT [steers the standard-setting agenda](#). This approach means that Beijing's political interests can trump business ones. For instance, in the case for battery swapping, most foreign carmakers are not prioritizing the technology, but the Chinese government is doubling down on swapping.

The state-driven approach poses significant challenges for foreign companies, as opportunities to participate in Chinese standard setting [remain limited](#). Nevertheless, foreign companies can use the list to gauge China's short- to mid-term goals in the automotive sector. If L3 autonomous driving were to progress in China, foreign automotive chip and software producers — areas where China lags behind — and L3-ready carmakers could reap in huge sales.

Article: Key Points of Automotive Standardization Work in 2022 (2022 年汽车标准化工作要点) ([Link](#))

Issuing body: MIIT

Date: March 18, 2022

5. Can China keep a secret? SAMR launches trade secret pilot project

At a glance: The State Administration for Market Regulation (SAMR) released a pilot work plan to improve the protection of trade secrets. The policy encourages cities and counties to draw up local pilot work plans and submit applications by May 22. The key goals and measures are:

- Improve trade protection rules based on local conditions, for instance by helping companies to prevent leakage and strengthen trade secret law enforcement
- Establish a trade secret protection service system to improve the communication between affected companies and government officials by hiring trade secret liaison officers and establishing trade secret protection alliances
- Strengthen the protection of trade secrets in key local industries, particularly for tech- and innovation-intensive enterprises
- Formulate national guidelines for the protection of trade secrets based on the pilot projects

MERICs comment: A lack of proper trade secret protection has long been a feature of China's intellectual property protection system. Indeed, Beijing has used [state-sponsored trade secret theft](#) to gain access to foreign-developed technologies.

But recent developments indicate that China is taking IPR protection much more seriously now. Partly to appease US counterparts during the ongoing trade war, China overhauled its [Anti-unfair Competition Law](#) in 2019 by placing much of the burden of proof on the defendant. Most importantly, China signals that its companies — which are catching up technologically — need improved IPR protection. Better trade secret protection is also meant to stimulate further innovation: “Innovation is the primary driver of development, and protecting IP means protecting innovation” ([President Xi Jinping](#), 2020).

While China primarily has the interests of Chinese companies in mind, the pilot project could advance the interests of foreign firms. Some of them rely extensively on trade secrets to protect their knowhow from prying competitors, particularly in China where other means of IPR are seen as less reliable. Nevertheless, there is no guarantee that improved regulation on trade secrets will translate to better implementation on the ground. Given the geopolitical context, it's unclear how fairly foreign firms will be treated when taking local competitors to court.

Article: National Trade Secret Protection Innovation Pilot Work Plan (全国商业秘密保护创新试点工作方案) ([Link](#))

Issuing body: SAMR

Date: March 23, 2022

NOTEWORTHY

Policy news

- *March 7:* MIIT issues guidelines for the construction of a standard system for autonomous and connected vehicles ([MIIT notice \(CN\)](#); [MERICS China Industries Brief \(EN\)](#))
- *March 12:* The Ministry of Housing and Urban-Rural Development releases a Five-Year Plan on the energy efficiency of building structures, aiming to increase the energy efficiency of new urban residential buildings by 30 percent by 2025 ([MO-HURD notice \(CN\)](#))
- *March 15:* The NDRC, MIIT and other government ministries release the 2022 application criteria for preferential tax policies for semiconductor and software companies ([NDRC notice \(CN\)](#))
- *March 20:* The State Council releases guidelines to strengthen ethics oversight in science and technology research ([State Council notice \(CN\)](#); [South China Morning Post article \(EN\)](#))
- *March 22:* The NDRC and NEA publish a 14th FYP for the development of a modern energy system, emphasizing energy security ([NDRC notice \(CN\)](#); [China Dialogue article \(EN\)](#))
- *March 25:* The NDRC updates the negative list for market access, cutting the number of restricted industries from 123 to 117 ([NDRC notice \(CN\)](#); [Asia Financial article \(EN\)](#))

Corporate news

- *March 3:* Danone announces the acquisition of Hunan-based Eurbest Nutritional Food, a producer of infant formula, infant formula goat milk, rice powder and dietary supplements ([Yicai article \(CN\)](#); [Yicai article \(EN\)](#))
- *March 4:* Japanese carmaker Mitsubishi, German auto supplier Bosch and Chinese Blue Park Smart Energy Technology Group (a subsidiary of state-owned carmaker BAIC) cooperate on commercializing battery swapping in China ([Mitsubishi press release \(EN\)](#))
- *March 9:* China's Semiconductor Industry Association releases statistics showing that in 2021 China's sales of integrated circuits grew 18.2 percent year on year to reach CNY 1.05 trillion ([Sina article \(CN\)](#); [South China Morning Post article \(EN\)](#))
- *March 10:* Saudi Arabian Oil Company (Aramco) and its Chinese JV partners resume plans to develop an integrated refinery and petrochemical complex in North East China that could refine up to 300,000 barrels per day ([Aramco press release \(EN\)](#); [Caixin Global article \(EN\)](#))

- *March 17:* Deutsche Bank (China) Co. Ltd. becomes the first EU-owned bank to provide custody services to foreign institutional investors trading stocks listed on the Beijing Stock Exchange ([China Securities Journal article \(CN\)](#); [Caixin article \(EN\)](#))
- *March 21:* German carmaker Volkswagen announces MoUs with Huayou Cobalt and Tsingshan Group to source battery materials ([Bloomberg article \(EN\)](#))
- *March 24:* Beyond Meat launches a Pinduoduo store after securing partnerships with JD.com and Tmall, reflecting the growing market for plant-based protein in China ([Phoenix Media article \(CN\)](#); [South China Morning Post article \(EN\)](#))

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