可持续交通在中国
SUSTAINABLE TRANSPORT IN CHINA

China Transport Policy Briefing

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Table of Policies

On Behalf of:

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Federal Ministry of Transport and Digital Infrastructure

Federal Ministry for Economic Affairs and Energy

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Abbreviations

CAAM	China Association of Automobile Manufacturers	中国汽车工业协会
CAFC	Corporate Average Fuel Consumption	企业平均燃料消耗量
GEM	GEM Co., Ltd.	格林美
HDV	Heavy Duty Vehicle	重型车
ICV	Intelligent Connected Vehicle	智能网联汽车
MEE	Ministry of Ecology and Environment	生态环境部
MIIT	Ministry of Industry and Information Technology	工业和信息化部
MoF	Ministry of Finance	财政部
MofCom	Ministry of Commerce	商务部
MoST	Ministry of Science and Technology	科学技术部
MoT	Ministry of Transport	交通部
NEA	National Energy Administration	国家能源局
NEV	New Energy Vehicle	新能源汽车
PEMS	Portable Emission Measurement System	车载排放测试系统
SAMR	State Administration of Market Regulation	国家市场监督管理总局
SAE	Society of Automotive Engineers of China	中国汽车工程学会
SAT	State Administration of Taxation	国家税务总局

1. **Notice on the Publishing of the Three-Year Action Plan for Defending the Blue Sky (issued by the State Council on 03.07.2018)**
   国务院关于印发打赢蓝天保卫战三年行动计划的通知
   http://www.gov.cn/zhengce/content/2018-07/03/content_5303158.htm

   In July 2018, Chinese Premier Li Keqiang presented the "Three-Year Action Plan on Defending the Blue Sky". It aims at a reduction of emissions and an improvement of air quality, especially in the Beijing-Tianjin-Hebei (Jing-Jin-Ji) region, the Yangtze River Delta, and the Yan-Ping Plain (Shaanxi and Shanxi Province). The plan stipulates a 15% reduction of sulfur dioxide and nitrogen emissions by 2020 compared to 2015 and tighter restrictions on PM2.5 emissions. In order to reach these goals, appropriate measures in the energy, industrial and transport sectors will be implemented.

   In the transport sector, new energy vehicles (NEVs) will play an important role. The action plan set the goal to produce 2 million NEVs by 2020, with a focus on the logistics sector. The existing logistics fleet shall be partially replaced by NEVs, while the remaining conventional logistics vehicles will be subjected to harsher restrictions. Furthermore, rail freight transport volume shall increase by 30% compared to 2017, and even by 40% in the Jing-Jin-Ji region.

2. **Vice-Minister of Transport, Liu Xiaoming, at the State Council Policy Briefing: Accelerating the Adjustment of the Transportation Structure and Vigorously Improving the Efficiency of Comprehensive Transportation (Chinese Transport News, 03.07.2018)**
   交通运输部 刘小明在国务院政策例行吹风会上表示 :加快推进运输结构调整 大力提高综合运输效率
   http://www.mot.gov.cn/jiaotongyaowen/201807/t20180703_3041770.html

   At the State Council Policy Briefing at the beginning of June, Vice-Minister of Transport, Liu Xiaoming, emphasized the urgent need for adjustment of China's transportation structure in order to reduce pollution and improve the quality of transport. He cited structural imbalances as the main reason why the advantages of different transportation methods are not used to their full potential.

   Liu then announced adjustments in China's transport sector, with a focus on supply-side reform in the Jing-Jin-Ji region surrounding Beijing, the Yangtze River Delta around Shanghai, and the Fen River and Wei River Basin in Shanxi and Shaanxi Province. Most importantly, the adjustments will pursue a shift from road to rail and from road to waterways. In the coming three years, the volume of railway and

waterway freight is set to increase by 1.1 billion tons and 0.5 billion tons respectively, while bulk cargo road transportation at costal ports is set to decrease by 0.44 billion tons. To put this into perspective, this increase in railway freight transport equals adding the size of Germany's total railway freight of 2016, 349 million tons, each year.

Furthermore, railway transport capacity will be increased, waterway transportation control systems will be upgraded, road freight transport will be improved, the construction of multimodal transport hubs will be sped up, free information exchange will be fully realized and urban delivery will become more environmentally friendly. More than 1 million heavy-duty diesel trucks which are of or below the National III Standard will be decommissioned.

Liu also announced pilot zones in the Jing-Jin-Ji region and the surrounding area with a focus on further structural changes. One such change will be the prioritization of support for railways not operated by the government, so-called "special railway lines". By 2020, the proportion of railway transportation by large industrial and mining enterprises on special railway lines should exceed 80%. Another topic is the usage of NEVs in urban distribution, with the proportion of NEVs amongst updated distribution vehicles set to reach 80%. Demonstration projects for cold chains, e-commerce express delivery, and the transportation of construction materials will be established.

3. Announcement of the National Standard on Pollutant Emissions "Limits and Measurement Methods for Pollutant Emissions from Diesel-Fueled Heavy Duty Vehicles (CHINA VI)" (issued by the Ministry of Ecology and Environment (MEE) and the State Administration of Market Regulation (SAMR) on 26.06.2018)

关于发布国家污染物排放标准《重型柴油车污染物排放限值及测量方法（中国第六阶段）》的公告

http://www.zhb.gov.cn/gkml/sthjbgw/sthjbgg/201807/t20180703_445973_wap.shtml?from=timeline

In order to curb air pollution caused by diesel-fueled heavy duty vehicles (HDV), MEE and SAMR on 26 June 2018 jointly released a new national standard on limits and measurement methods for emissions from diesel-fueled HDV (CHINA VI).

The standard will be implemented in two stages, CHINA VI a and CHINA VI b. Over these two stages, the standard will become successively stricter in its requirements on emitted particulate numbers limits under real road conditions and on remote on-board diagnostics data reporting.

Date effective	HDVs affected	Standard
01.07.2019	Gas-fueled HDVs	CHINA VI a
01.07.2020	Urban HDVs	CHINA VI a
01.01.2021	Gas-fueled HDVs	CHINA VI b
01.07.2021	All HDVs	CHINA VI a
01.07.2023	All HDVs	CHINA VI b

Table 1 - Progressive Implementation of China VI. Based on: Limits and Measurement Methods for Pollutant Emissions from Diesel-Fueled Heavy Duty Vehicles (CHINA VI).

Compared to CHINA V, CHINA VI lowers the limit for emitted NOx by more than 77% and for emitted particle matter (PM) by more than 67%. The second phase of the new standard also puts the first limit on emitted particulate numbers and for the first time requires a portable emission measurement system (PEMS) test on real road conditions. It also introduces standards on the warranty of emission controlling equipment and some auto parts.

In addition, CHINA VI set up a combined monitoring mechanism between MEE and MIIT, in order to monitor the fuel consumption during emission testing and emissions during fuel comsumption testing. Previously, these two tests have been implemented separately by MEE and MIIT, allowing OEMs to use differently equipped vehicles to their advantage.

4. Implementation Opinions on Comprehensively Strengthening the Ecological and Environmental Protection and Ensuring the Success of the Prevention Fight against Pollution (issued by the Ministry of Transport (MoT) on 10.07.2018)

关于全面加强生态环境保护坚决打好污染防治攻坚战的实施意见

http://zizhan.mot.gov.cn/zfxxgk/bnssj/zhghs/201807/t20180710_3044623.html

After the Communist Party and State Council published the Guiding Opinions on Comprehensively Strengthening the Protection of the Ecological Environment and Firmly Fighting against Pollution in June 2018, MoT issued the corresponding Implementation Opinions in the transportation sector on 10 July 2018.

The Implementation Opinions detail that the measures promoting the application of new and clean energy should focus on the fields of urban public buses, taxis, urban distribution, postal and express delivery, airports, railway hubs and strategically important ports. By the end of 2020, the NEV fleet of urban public buses, taxis, and urban distribution should reach 600,000 vehicles. In strategically

important areas, such as autonomous cities and cities at provincial level, all public buses shall be replaced with NEVs.

Furthermore, the application of shore electricity in the Pearl River Delta, the Yangtze River Delta, the Emission Control Zone in the Bohai Sea (the shore of the Jing-Jin-Ji region) and other important ports should be promoted. In addition, high-emission diesel trucks will be eliminated and replaced. By the end of 2020, the Jing-Jin-Ji area and the surrounding areas as well as the plains of the Fen and Wei River (Shanxi and Shaanxi Province) will have eliminated 100,000 diesel HDVs under China III.

5. Interim Administrative Measures on the Traceability of Traction Battery Recycling (issued by the Ministry of Industry and Information Technology (MIIT) on 03.07.2018)

新能源汽车动力蓄电池回收利用溯源管理暂行规定
http://www.miit.gov.cn/n1146295/n1146592/n3917132/n4061768/c6245200/content.html

In accordance with the "Interim Measures on Traction Battery Recycling" released this February, MIIT this month issued the "Interim Measures on the Traceability of Traction Battery Recycling". The document announced the establishment of an administrative platform (http://www.evmam-tbrat.com/) where information concerning traction batteries will be collected.

Battery producers, automakers, vehicle recycling and scrapping enterprises, enterprises in the business of battery cascade utilization as well as battery recycling enterprises are responsible for uploading information on the batteries. Provincial Industry and Information Departments will be responsible for supervision and monitoring and for tracing the batteries in conjunction with relevant authorities at the same level. This regulation shall come into effect on 1 August 2018.

6. Notice on the Implemention of Pilot Projects on Traction Battery Recycling (jointly issued by MIIT, the Ministry of Science and Technology (MoST), MEE, MoT, the Ministry of Commerce (MofCoM), SAMR, and the National Energy Administration (NEA) on 25.07.2018)

七部门关于做好新能源汽车动力蓄电池回收利用试点工作的通知

http://www.miit.gov.cn/n1146290/n4388791/c6275251/content.html

On 25 July 2018, MIIT jointly with MoST, MEE, MoT, MofCom, SAMR and NEA announced 17 pilot areas for the implementation of a traction battery recycling system: the Jing-Jin-Ji region, Shanxi Province, Shanghai City, Jiangsu Province, Zhejiang Province, Anhui Province, Jiangxi Province, Henan Province, Hubei Province, Hunan Province, Guangdong Province, Guangxi Zhuang Autonomous Region, Sichuan Province, Gansu Province, Qinghai Province, Ningbo City, and Xiamen City.

Figure 1 - Provinces selected as pilot areas. Own construction.

The pilot projects are part of an ongoing effort to build a system for recycling traction batteries by 2020 and to explore innovative cooperation mechanisms. This involves setting up production lines, efficient retrieval of batteries, the commercialization of the recycling system, as well as developing benchmark recycling companies, key recycling technologies, relevant standards and supporting policies. The pilot phase will last for no longer than two years. China Tower Co., Ltd. will be in the lead to integrate the pilot projects, to report on them, to develop a battery cascade utilization demonstration project, and to establish an industry association.

7. Opinions on the Enterprise White List (First Batch) in Line with the "Standard Conditions for the Comprehensive Utilization of Decommissioned NEV Power Batteries" (issued by MIIT on 27.07.2018)

关于公开征求符合《新能源汽车废旧动力蓄电池综合利用行业规范条件》企业名单（第一批）的意见

http://www.miit.gov.cn/n1278117/n1648113/c6278593/content.html

On 27 July 2018, MIIT announced a White List of five NEV battery recycling enterprises which meet the requirements of the "Standard Requirements for the Comprehensive Utilization of Decommissioned NEV Power Batteries". Besides Huayou Cobalt, Ganzhou Highpower Technology and JHD, the list also lists GEM and Brunp, which have close ties to BYD and CATL, China's largest traction battery manufacturers. These enterprises were chosen based on their scale, their rate of automatization, low energy consumption, environmental protection standards, efficient utilization of resources, and clean and high efficient technology. Going forward, they will receive strengthened support from the government.

Number	Province	Enterprise
1	Zhejiang	Huayou Cobalt
2	Jiangxi	Ganzhou Highpower Technology
3	Hubei	GEM
4	Hunan	Brunp
5	Guangdong	JHD

Table 2 - First batch of approved NEV battery recycling enterprises. Source: List of Enterprises as published by MIIT.

8. 2017 Report on Corporate Average Fuel Consumption (CAFC) and NEV credits (issued by MIIT on 02.07.2018)

2017 年度中国乘用车企业平均燃料消耗量与新能源汽车积分情况

http://www.miit.gov.cn/n1146295/n1652858/n1652930/n4509607/c6243329/content.html

Following the publishing of the "Notice on CAFC and NEV Credit Administration for the Years 2016 and 2017" in autumn 2017 by multiple ministries, MIIT in July 2018 released a report on CAFC and NEV Credits in 2017. In 2017, 130 domestic passenger vehicle manufacturers and importers produced and imported 24,692,900 passenger vehicles (excluding exported passenger cars). The average vehicle weight was 1,438 kg. The actual fuel consumption was on average 6.05 l/100 km. This accounts for

123,814,000 positive credits and 1,689,000 negative credits for fuel consumption. Out of the positive credits, NEVs account for 1,793,200.

These credits can be traded on MIIT's new CAFC/NEV credit trading platform (http://cafcnev.miit-eidc.org.cn), which went online on 2 July 2018. Credit trading allows those with negative credits to balance their exhaust footprint and serves as a monetary incentive to those who perform well. Entities with an average of negative credits in 2016 and 2017 should hand in their CAFC report until the end of August and should bring their number of negative credits down to zero until the end of September 2018.

9. Announcement on Preferential Policies of Vehicle and Vessel Tax for Energy-Saving Vehicles and NEVs (issued by MoF on 27.07.2018)

关于节能新能源车船享受车船税优惠政策的通知

http://szs.mof.gov.cn/zhengwuxinxi/zhengcefabu/201807/t20180727_2973826.html

On 27 July 2018, MoF, the State Administration of Taxes (SAT), MIIT and MoT jointly announced Preferential Policies of Vehicle and Vessel Tax for Energy-Saving Vehicles and NEVs.

In the future, NEVs and new energy vessels will be fully exempt from vehicle and vessel tax. These exemptions only apply to pure electric commercial vehicles, plug-in hybrid vehicles, and fuel cell commercial vehicles. Furthermore, these NEVs have to be produced by companies which have a sales permit for China, fulfil NEV technology standards on driving range, energy consumption, energy density of traction batteries, etc., and fulfill requirements on quality, product consistency, security testing, battery recycling, etc. In the case of new energy vessels, the main engine has to operate on natural gas and the heat value has to be composed of less than 5% of diesel generated heat value.

Gas-, oil-, and diesel-fueled light- and heavy-duty commercial vehicles produced by companies with a sales permit in China and oil- and diesel-fueled passenger vehicles will have their tax halved. However, a precondition is the compliance with driving cycle fuel consumption limits as stipulated in further standards (1, 2), and for oil- and diesel-fueled passenger vehicles to not exceed a discharge volume of 1.6 litres.

The announced policies have immediate effect.

10. Adjustment Plan for the Shipping Emission Control Zone (Draft) (issued by MoT on 09.07.2018)

船舶排放控制区调整方案（征求意见稿）意见的函

http://www.mot.gov.cn/yijianzhengji/201807/P020180709599129911966.pdf

Aiming at emissions produced through shipping, MoT decided on stricter standards for fuel components and engine power rates in the Shipping Emission Control Zone in the draft of the "Adjustment Plan for the Shipping Emission Control Zone".

In the adjustment plan, the scope of restriction for the allowed percentage of sulfur as a fuel component was expanded. Instead of only being applicable in core ports, starting from 1 January 2019, the sulfur content of marine fuels must not exceed 0,5% m/m for navigating or parking in the whole of China's Shipping Emission Control Zone. Starting from 2020, the sulfur content of marine fuels used in the Emission Control Zone must not exceed 0.1% m/m during docking. Ships entering or docking in Hainan waters must also use marine fuel oil with a sulfur content of less than 0.1% m/m.

Furthermore, marine emissions requirements in the Emission Control Zone will successively be further regulated, as stipulated in the "Limits and Measurement Methods for Exhaust Pollutants from Marine Engines (CHINA I, II)".

Ship type	Single Cylinder Volume (SV) in l	Power Rate (P) (kW)	CO (g/kWh) Limit	HC+NOx (g/kWh) Limit	CH4 (g/kWh) Limit	PM (g/kWh) Limit
P ≥ 37kW, SV < 5l	SV<0.9	P ≥37kW	5	5.8	1.0	0.3
	0.9≤SV< 1.2	P ≥37kW	5	5.8	1.0	0.14
	1.2≤SV<5	P ≥37kW	5	5.8	1.0	0.12
5l < SV > 30L	S≤SV<15	P<2000	5	6.2	1.2	0.14
		2000≤P<3700	5	7.8	1.5	0.14
		P≥3700	5	7.8	1.5	0.27
	15≤SV<20	P<2000	5	7.0	1.5	0.34
		2000≤P<3000	5	8.7	1.6	0.5
		P≥3700	5	9.8	1.8	0.5
	20≤SV<25	P<2000	5	9.8	1.8	0.27
		P≥2000	5	9.8	1.8	0.50
	25≤SV<30	P<2000	5	11	2.0	0.27
		P≥2000	5	11	2.0	0.50

Table 3 - Exhaust Pollutants Limits for Marine Engines under China II. Data Source: Limits and Measurement Methods for Exhaust Pollutants from Marine Engines (CHINA I, II).

Starting from 2022, if container ships, ocean liners, passenger ships of more than 3000 tons, and freight ships of more than 5000 tons used for sea shipping do not meet the CHINA II emissions requirements for their respective ship type (rf. Table 3), they must use onshore power during the docking period, if available. If used for inland navigation, and if the single engine power rate of such ships is less than 500kW and does not meet the CHINA II emissions requirement, such ships must also use onshore power. Starting from July 2021, if the power rate of the largest single engine of a ship exceeds 500kW for inland navigation, it also has to comply with the CHINA II emission requirements. Lastly, any Chinese ships built after June 2020 with an engine power rate of more than 37kW must be built to meet CHINA II emission requirements.

11. Projects for the "Implementation Plan for Key Projects in the Medium and Long-Term Development Plan of the Automobile Industry" of the Industrial Equipment Department of MIIT Approved (issued by MIIT on 05.07.2018)

装备工业司委托的"汽车产业中长期发展规划重点工程实施方案编制"项目通过验收
http://www.miit.gov.cn/n1146290/n1146402/n1146455/c6248497/content.html

On 4 July 2018, eight key projects were approved as part of the Medium and Long-Term Development Plan of the Automobile Industry:

- "Construction of an Innovation System",
- "Breakthrough Projects for Key Auto parts",
- "R&D and Promotion of NEVs",
- "ICV Promotion",
- "Promotion of Advanced Energy-Saving and Environmental Protection Technology",
- "Automobile + Cross-Border Integration Project",
- "Brand Construction of Automobile Quality",
- "Overseas Development".

The projects were reviewed by an expert group at an event attended by the Industrial Equipment Department of MIIT, the Coordination Division of NDRC, the Society of Automotive Engineers of China (SAE), the China Association of Automobile Manufacturers (CAAM), Tsinghua University, the Development Research Center of the State Council, the National Information Center and representatives from OEMs.

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