

# POLICY UPDATE

FEBRUARY 2023

© 2023 INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

## China's Clean Diesel Action Plan: Phase II

Fifteen Chinese central agencies, led by the Ministry of Ecology and Environment (MEE), launched an Action Plan for the Battle Against Diesel Truck Pollution in November 2022. The purpose is to substantially clean up diesel-powered transportation fleets, including on-road diesel vehicles, off-road diesel equipment, and shipping engines.<sup>1</sup> This plan, which we hereafter refer to as the Clean Diesel Action Plan: Phase II, can be considered as a kind of second phase of the previous plan to address diesel pollution, which was published in 2018.<sup>2</sup> The new plan is one of three action plans that all aim to improve air quality in China during the 14th Five-Year Plan. The other two are the Action Plan to Eliminate Heavy-polluted Days and the Action Plan for Ozone Pollution Prevention and Control.

The Clean Diesel Action Plan: Phase II sets a number of targets by 2025 and specifies 14 actions under five program areas: modal shift; clean diesel trucks; clean non-road machinery and ships; regular inspection and monitoring of truck fleets in key industries; and joint enforcement actions on non-compliant trucks. Priority is placed on the so-called key regions, the dozen provinces and municipal cities that are prone to air pollution. These are Beijing, Tianjin, Hebei, Shanxi, Shandong, Henan, Shanghai, Jiangsu, Zhejiang, Anhui, Shaanxi, and Inner Mongolia. The key regions are subject to tougher requirements and closer supervision, as detailed in the following sections. The plan also puts particular emphasis on diesel trucks and non-road machinery, especially those that transport coal, ore, and minerals.

As illustrated in Figure 1, four primary targets for 2025 are specified. Note that three of the four are focused on trucks; two focus on reducing the emissions from diesel trucks and the other is about increasing the share of new energy trucks in the fleet. The fourth involves modal shift.

[www.theicct.org](http://www.theicct.org)

[communications@theicct.org](mailto:communications@theicct.org)

[twitter @theicct](https://twitter.com/theicct)

1 Ministry of Ecology and Environment, "Action Plan for Battle Against Diesel Truck Pollution 2022," (2022), <https://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202211/W020221116629516131124.pdf>

2 Ministry of Ecology and Environment, "Action Plan for Battle Against Diesel Truck Pollution 2018," (2018), <https://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/201901/W020190104656772362578.pdf>

## Action plan targets

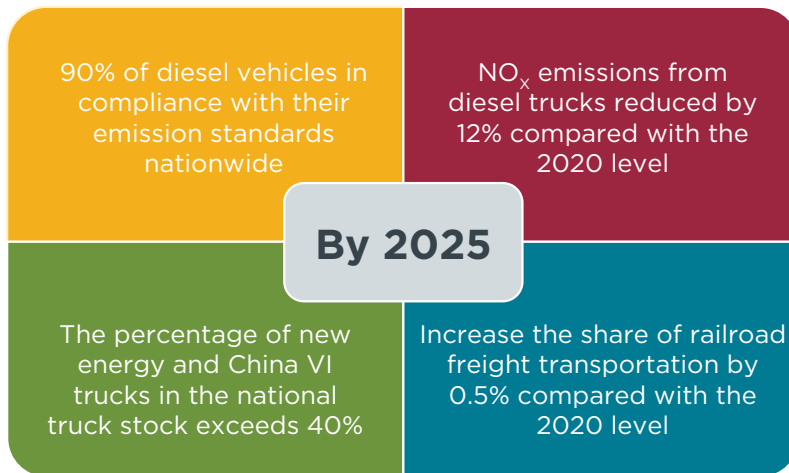


Figure 1. Primary plan targets by 2025.

## PLAN DETAILS BY PROGRAM AREA

### MODAL SHIFT FROM TRUCK TO RAIL AND WATERWAY

China's freight sector is currently heavily dependent on diesel trucks. As these trucks generate large amounts of pollutant emissions and consume large amounts of energy, with the resultant higher costs, the program mainly focuses on expanding railroad and waterway use for freight transport. Specific goals include: to increase railroad freight transportation by 10% and waterway freight by 12% in 2025 compared with the 2020 levels, and increase the volume of container rail-water intermodal transport by 15% annually; in key ports, 80% of the ore and coke should be transported by rail, water, enclosed belt conveyor, or new energy vehicles; in major coal provinces, 90% of ore and coke that is transported more than 500 km should be transported by rail; and rail should be available in at least 70% of key ports by 2025. To achieve these goals, specific tasks include increasing rail freight capacity, developing double-decker container transport, implementing electrification for general-speed rail lines, and accelerating the construction of new railroad lines.

### CLEAN DIESEL TRUCKS

The goal of this program is to enhance the level of compliance with emission standards by new and in-use diesel trucks and to promote the use of new energy vehicles. For new trucks, the program emphasizes the already-planned national implementation of the China VI-b standard starting from July 1, 2023 and the continued development of "ultra-low emission and near-zero-emission" technologies for motor vehicles. For in-use trucks, the program describes a comprehensive in-use vehicle emission inspection and monitoring system to enhance in-use compliance and enforcement, including checking the on-board diagnostics (OBD) system, emission control equipment, and online emissions monitoring system and performing on-road emissions tests on randomly selected vehicles. In the event of things such as cheating on emission control technology, blocking OBD functions, non-compliance with the in-use vehicle emission standard, and not disclosing environmental protection information, the type-approval certification of the vehicles is to be suspended or revoked. In accordance with how these plans typically work, the program also emphasizes the need to continue to implement the already established inspection/maintenance (I/M) program and the recall program. For new energy vehicles, the

program requires that the new energy vehicle share of new sales of public buses, taxis, urban logistics trucks, and sanitation vehicles in key regions should reach at least 80%. In addition, the program requests the promotion of zero-emission heavy-duty trucks through specific tasks including carrying out demonstration projects for hydrogen fuel cell medium- and heavy-duty trucks and launching freight corridor demonstration projects for zero-emission trucks in key regions.

### **CLEAN NON-ROAD MACHINERY AND SHIPS**

This program focuses on strengthening the supervision of new and in-use off-road equipment and shipping vessels. It emphasizes the implementation of the China IV non-road emission standard on December 1, 2022 and the Phase II marine engine standard on July 1, 2022, and both were indeed implemented on schedule. Additionally, the program encourages the use of new energy non-road machinery. In particular, new non-road machinery operated at railway yards, logistics parks, ports, airports, and in industries of thermal power, steel, coal, coking, building materials, and mining are encouraged to be new energy, and almost all sales of new forklifts with a weight below 3 tonnes should be new energy. The program also encourages the use of new energy ships for ferries, short-distance cruise ships, and harbor craft.

Additionally, local governments are encouraged to make plans to scrap old non-road machinery. Non-road machinery certified to the China I standard and before should be gradually phased out nationwide and it is encouraged that these be replaced by China IV or newer machineries. All urban construction equipment must be registered in an online management system. The program requests that local governments establish low-emission zones for non-road equipment to prohibit the use of high-emitting equipment and eliminate black-smoke engines. In key regions, 20% of in-use non-road machinery should be randomly selected and tested every year. Other key actions include accelerating the construction and retrofitting of shore power facilities and on-board shore power connection facilities on ships; eliminating high-emitting ships and ships that consume large amounts of energy; and retrofitting marine diesel engines and aftertreatment technologies. According to this action plan, MEE also plans to develop and implement emission standards for internal combustion locomotive engines.

### **REGULAR INSPECTION AND MONITORING OF TRUCK FLEETS IN KEY INDUSTRIES**

This program is a new addition to the action plan. It was not present in the earlier phase and it highlights the responsibilities of truck fleet operators in key industries. Key industries include thermal power, steel, coal, coking, and non-ferrous metals. The goal is to have 70% of the bulk freight in these key industries transported by a cleaner method such as railway, waterway, enclosed belt conveyor, and new-energy or China VI-certified trucks by 2025. In key regions, the goal is 80%. The program encourages large industrial and mining enterprises to carry out demonstration projects with zero-emission truck fleets and requires that key industrial and mining enterprises in key regions establish a mobile source emissions control plan during heavy-polluted days. During heavy-polluted days, MEE and other authorities will carry out special inspections of diesel trucks and non-road machinery in these key enterprises.

### **JOINT ENFORCEMENT ACTIONS AGAINST NON-COMPLIANT TRUCKS**

This program is also a new addition to the action plan, and it highlights the collaboration between regulatory agencies. Responsible agencies include the MEE, Ministry of Public Security (MPS), Ministry of Transport (MOT), National Development and Reform Commission, Ministry of Finance, Ministry of Commerce, General Administration of Customs, State Administration for Market Regulation, and the

National Energy Administration. These agencies are to carry out joint enforcement actions to manage emissions from mobile sources, with a focus on trucks used for bulk freight in key industries and high-emitting compressed natural gas vehicles in key regions. The program sets clear responsibilities. MEE is responsible for monitoring and investigating non-compliance, MPS is responsible for imposing penalties, and MOT is responsible for supervising maintenance. The program plans to continue to carry out special campaigns against violating fuel stations and fuel tankers in joint enforcement actions.

Another important measure is to promote data and information sharing between different regulatory agencies and different regions. Local I/M data should be uploaded to the national platform every day and the registration database of non-road machinery should be shared across provinces and cities. In addition, the program calls for developing an on-board monitoring system for diesel trucks and non-road machinery, and exploring digital management modes for identifying, locating, investigating, and enforcing penalties for non-compliance.