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Analysis of the CO2 Emissions of Public Passenger Transport in Tianjin City of China

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Abstract : Low-carbon public passenger transport is an important part of low carbon city. The CO₂ emissions of public passenger transport in Tianjin from 1995 to 2010 are estimated with IPCC CO₂ counting method, which shows that the total CO₂ emissions of Tianjin public passenger transport have gradually become stable at 1,425.1 thousand tons. And then the CO₂ emissions of the buses, taxies, and rail transits are calculated respectively. A CO₂ emission of 829.9 thousand tons makes taxies become the largest CO₂ emissions source among the public passenger transport in Tianjin. Combining with passenger volume, this paper analyzes the CO₂ emissions proportion of the buses, taxies, and rail transits compare the passenger transport rate with the proportion of CO₂ emissions, as well as the CO₂ emissions change of per 10,000 people. The passenger volume proportion of bus among the three public means of transport is 72.62% which is much higher than its CO₂ emissions proportion of 36.01%, with the minimum number of CO₂ emissions per 10,000 people of 4.90 tons. The countermeasures to reduce CO₂ emissions of public passenger transport in Tianjin are to develop rail transit, update vehicles and use alternative fuel vehicles.

Keywords : public passenger transport, carbon emissions, countermeasures, China
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