

## CNG buses in Ho Chi Minh City

Vietnam

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### Background Information

Hồ Chí Minh City (HCMC) is located in the south-eastern region of Vietnam, 1,760 km south of Hanoi. The average elevation is 19 meters (62 ft.) above sea level. The city covers an area of 2,095 km<sup>2</sup>, with a population of 7.6 million people. An increased number of vehicles (about 5.5 million vehicles including 5 million motorbikes and 500,000 automobiles in 2012), along with the lack of urban transport system and the appropriate infrastructure, has led to soaring traffic congestion and pollution. In order to respond to this problem, from 2002, HCMC implemented a policy to restore and develop the city's public transport system.

Over the past 10 years, the public transport system of HCMC has obtained remarkable achievements through the creation of different types of bus routes such as night buses, bus routes for students and workers, which are made up of government supported bus routes as well as privately supported bus routes. Now HCMC has nearly 3,000 different buses with about 1 million passengers per day. However, only 10% of travel demands are satisfied by buses and the traffic situation has continuously worsened.

#### Quick facts

Location	Ho Chi Minh City
Topic	Transport
Website	www.mt.gov.vn
Implementing Agency	Ministry of Transport

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To better meet the travel demands of the citizen, and to contribute to the socio-economic development of the city, the city has developed public transport vehicles using clean fuel parallel with the construction of urban railways. These activities aim to reduce environmental pollution and to ensure the sustainable, modern and civilized development of the city.

### Policy Details

In order to achieve the above-mentioned targets, starting from 2006, the City People Committee and Petro Vietnam signed a co-operation agreement with Investment & Social-Economical development which includes the promotion of CNG buses. In 2008, the Department of Transport & Petro Vietnam Southern Gas Joint Stock Company signed a plan to carry out research and development on using CNG for buses in HCMC.

The proposal of Saigon Passenger Transport Co. Ltd to set up a pilot investment project in CNG buses in which the local budget supports 70% of the loan interest was approved by the People's Committee, after which a submission was made to the Prime Minister for import tax exemption for 21 CNG buses and 29 chassis with CNG engines. The Office of the Government later released the document number 8598/VPCP-KTTH to inform them of the approval by the Deputy Prime Minister of the exemption from import taxes for CNG buses in 2010.

In 2010 and 2011, Petro Vietnam Southern Gas Joint Stock Company completed the investment of two CNG charging stations in HCMC, whereas Saigon Passenger Transport Co. Ltd and Transport Cooperative Coalition released two CNG buses routes number 53 and number 10. After nearly 3 years, the HCMC Department of Trans-

port coordinated with Saigon Passenger Transport Co. Ltd to release another 21 brand-new CNG buses for the route number 1 with the distance of 8,65 km, operating from 5 am to 21 pm with about 320 trips/day and 12.000 passenger turnover/day. Recently, the Transport Cooperative Coalition imported 5 more CNG buses by mobilizing capital from members (buses are in use for over 5 years) for route number 104. Presently in HCMC there are 28 CNG buses for 4 bus routes.

The HCMC Department of Transport realized that the use of CNG buses is a way to reduce environmental pollution. Preliminary assessments show that CO<sub>2</sub> emissions have decreased by 20%, NO<sub>x</sub> has decreased by 57%, CO has decreased by 63,5% and HC has decreased by 63%. Not only have PM and black smoke decreased by 100%, but there is no longer a bad smell in the roads and the noise level has decreased by about 3dBA. CNG engines emit more methane but less CO<sub>2</sub> compared to liquid fuel engines, so that they generate less GHGs. With the support from Petro Vietnam Southern Gas Joint Stock Company, CNG buses can save up to 30-40% in fuel expenditure in comparison with diesel buses, which results in the transport prices being reduced. The biggest disadvantage of the CNG buses is the price, as it is 25-35% higher than that of a diesel bus, and to build CNG charging station systems requires big capital investments.

### References

<http://www.gnv.cl/node/77>

<http://www.ngvjournals.com/vietnam-ho-chi-minh-citys-transit-agency-deploys-new-eco-friendly-buses-2/?lang=it>