

Air Quality Impact Assessment

Appendix 3.4 - 3

Trips and VMT for petrol vehicles in HK

Appendix 3.4 - 3 Trip and VMT for petrol vehicles in Hong Kong

Model year: 2033	Notation	Trips (Default) ^(a)	VMT (Default) ^(a)	Estimated VMT for Rural and Local Roads ^(b)	Trips per Estimated VMT for Rural and Local Road ^(c)
Motor Cycles	MC	180,486	405,805	52,755	3.421
Private Light Buses <=3.5 tonne	PrLB (4)	1,499	92,021	11,963	0.125
Petrol Private Cars & Light Goods Vehicles	PC+LGV petrol	518,033	7,243,487	941,653	0.550
Model year: 2028					
Motor Cycles	MC	180,486	405,805	52,755	3.421
Private Light Buses <=3.5 tonne	PrLB (4)	1,499	92,021	11,963	0.125
Petrol Private Cars & Light Goods Vehicles	PC+LGV petrol	518,034	7,231,634	940,112	0.551
Model year: 2023					
Motor Cycles	MC	180,486	405,805	52,755	3.421
Private Light Buses <=3.5 tonne	PrLB (4)	1,499	92,022	11,963	0.125
Petrol Private Cars & Light Goods Vehicles	PC+LGV petrol	518,034	7,255,916	943,269	0.549
Model year: 2018					
Motor Cycles	MC	180,486	405,805	52,755	3.421
Private Light Buses <=3.5 tonne	PrLB (4)	1,499	92,022	11,963	0.125
Petrol Private Cars & Light Goods Vehicles	PC+LGV petrol	518,034	7,212,327	937,603	0.553

Note:

- (a) Default data extracted directly from EMFAC-HK model v1.2
- (b) Estimated VMT for rural and local roads = VMT (Default) x 13.0%, which is the estimated % of VMT for rural and local roads in Hong Kong as detailed in the Table below.
- (c) While the trips per estimated VMT for different model years slightly vary, the trips per estimated VMT for 2018 are conservatively adopted for all model years as they are the highest among all model years.

Estimation of Vehicle-km for Local and Rural Roads in Hong Kong Territory

Region	Average Daily Vehicle-km ⁽¹⁾		
	Major Road Network ⁽²⁾	Minor Road Network ⁽²⁾	All Road Network
Hong Kong Island	4,494,833	1,125,352	5,620,185
Kowloon	7,431,869	990,708	8,422,577
New Territories	16,176,223	2,068,418	18,244,641
Subtotal:	28,102,925	4,184,478	32,287,403
% Share:	87.0%	13.0%	100.0%

Note:

- (1) Data for 2009 as extracted from Section 3.4 on page 10 of "The Annual Traffic Census 2009" published by Transport Department.
- (2) According to Appendices H and G of the Annual Traffic Census 2009, almost all (over 99%) of the trafficable lengths of minor road networks in Hong Kong belong to local distributors or rural roads with possible cold-start trips, whereas the remaining minority (less than 1%) of the minor road networks belong to district distributors with stopping/parking restrictions and hence no cold-start trips. For the major road networks in Hong Kong, however, a small portion (about 26%) of the trafficable lengths belong to local distributors or rural roads with possible cold-start trips, whereas the remaining large portion (about 74%) belong to expressways; trunk roads; primary or district distributors, all of which have stopping/parking restrictions and hence no cold-start trips. Therefore, the % of daily vehicle-km for local and rural roads in Hong Kong can be approximated by the % of daily vehicle-km for minor road networks in Hong Kong, which is on the low side and will in return result in conservative estimates for the no. of trips.
- (3) "The Annual Traffic Census 2009" can be found from the website - www.td.gov.hk/filemanager/en/content_4379/annual%20traffic%20census%202009.pdf