Supplementary Information

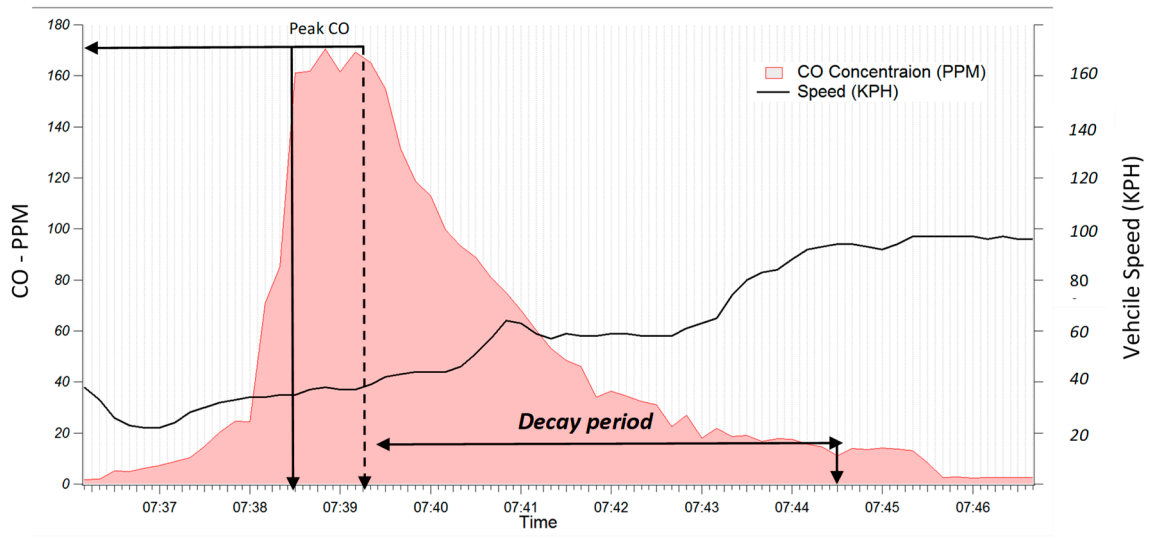

Figure S1 Time series data from an on-road spike to estimate the vehicle ventilation rate during new air ventilation setting during morning commute. The CO concentrations shown in red, peak stable concentration, decay period and normal equilibrium are identified. Vehicle speed is shown (black line).

The calculations of Fruin et al. [1] were considered during the calculations. However, due to the rapid build-up of pollutants and the large difference between the internal and ambient CO concentration the terms of the equation suggested by Fruin et al could be cancelled out.

Considered parameters for calculating approximate AER for NA setting.
Peak CO (Equilibrium constant (Max) Inside = 172 PPM

Average outdoor CO: 0.8 PPM

Ave speed: KM/h (62) (St.Dev15)

Time of Peak= 07:39:20

Time of Equilibrium after peak (07:44:30)

Proof of equilibrium Min is when values stabilized within +/- 2 PPM over 2 minutes

Estimated AER = 320 seconds / 3600 seconds (1 hour) = AER 11.25 hr −1 AER for New Air ventilation setting.

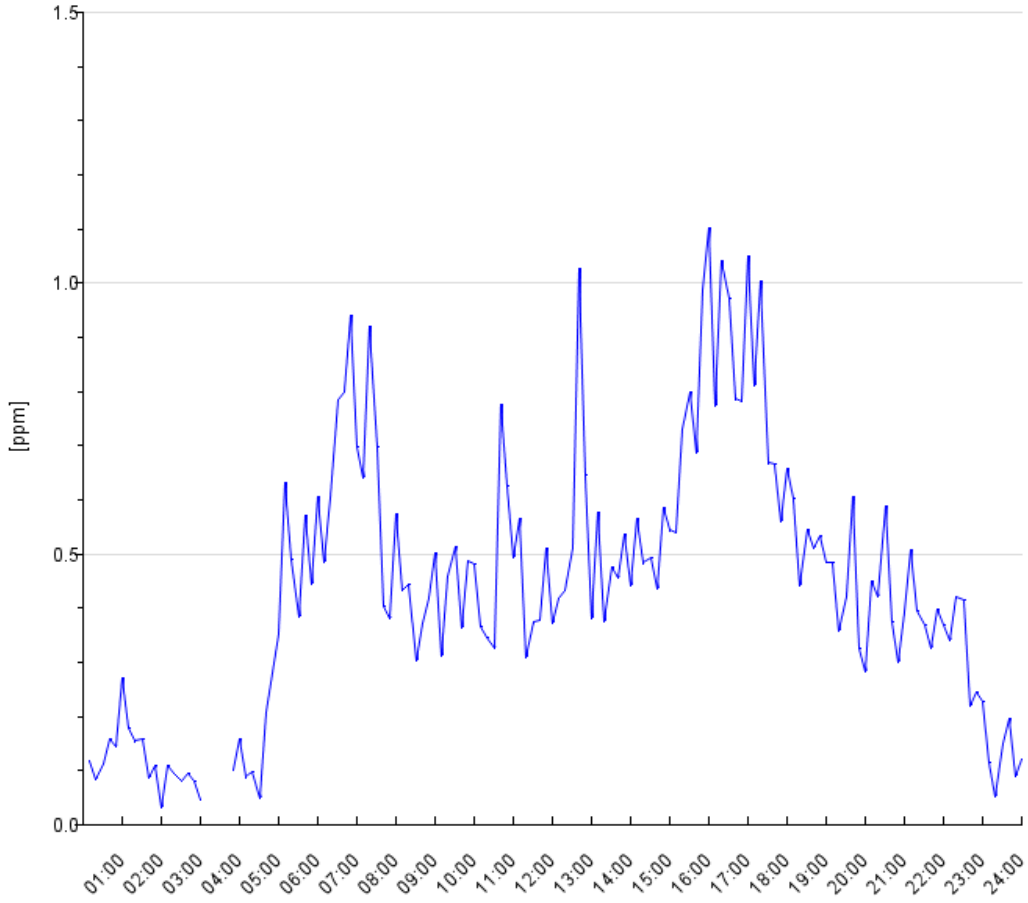

Figure S2 Annual averaged 24-hour CO data collected from Penrose air quality monitoring station.

1. Fruin, S.A.; Hudda, N.; Sioutas, C.; Delifino, R.J. A predictive model for vehicle air exchange rates based on a large, representative sample. *Environ. Sci. Technol.* **2011**, *45*, 3569–3575, doi:10.1021/es103897u.