

Table 8.2o
Comparison of Predicted Numbers of Non-compliant AQMS in the Year 2016
with and without Additional Measures

Averaging time	Ozone	RSP			Nitrogen dioxide			Total
	1-hr	24-hr	1 year	1-hr	24-hr	1 year		
1997	0	0	5 (KT, MK, SSP, TP, YL)	1 (MK)	3 (KT, MK, SSP)	1 (MK)	10	
Medium Growth	0	1 (MK)	6 (MK, SSP, KT, TW, YL, TP)	1 (MK)	3 (MK, SSP, KT)	1 (MK)	12	
Medium Growth with additional measures	0	0	6 (MK, SSP, KT, TW, YL, TP)	0	3 (MK, SSP, KT)	0	9	
High Growth (High End)	0	1 (MK)	8 (CW, MK, SSP, KT, TW, S, YL, TP)	1 (MK)	3 (MK, SSP, KT)	1 (MK)	14	
High Growth (High End) with additional measures	0	1 (MK)	6 (MK, SSP, KT, TW, YL, TP)	1 (MK)	3 (MK, SSP, KT)	0	11	

Notes:

(i) CW - Central/Western, MK - Mong Kok, SSP - Sham Shui Po, KT - Kwun Tong, KC - Kwai Chung, TW - Tsuen Wan, S - Sha Tin, YL - Yuen Long, TP - Tai Po

(ii) Hourly concentrations which exceed the AQO more than three times per year will be considered as non-compliant;

(iii) Daily concentrations which exceed the AQO more than once per year will be considered as non-compliant.

Table 8.2p
Comparison of Predicted Numbers of Exceedance at AQMS in the Year 2016
with and without Additional Measures

Averaging time	Ozone	RSP			Nitrogen dioxide			Total
	1-hr	24-hr	1 year	1-hr	24-hr	1 year		
1997	3 (S) 1 (CW)	1 (S) 1 (KT)	5 (MK, SSP, KT, YL, TP)	4 (MK) 2 (KT) 2 (SSP)	6 (MK) 3 (SSP) 2 (KT) 1 (TP)	1 (MK)	32	
Medium Growth	3 (S)	2 (MK) 1 (S) 1 (KT)	6 (MK, SSP, KT, TW, YL, TP)	4 (MK) 3 (KT) 2 (SSP)	6 (MK) 3 (SSP) 3 (KT) 1 (TP)	1 (MK)	36	
Medium Growth with additional measures	3 (S)	1 (MK) 1 (S) 1 (KT)	5 (MK, SSP, KT, YL, TP)	3 (MK) 2 (KT) 1 (SSP)	3 (MK) 2 (SSP) 2 (KT) 1 (TP)	1 (MK)	26	
High Growth (High End)	3 (S)	3 (MK) 1(S) 1(KT)	8 (CW, MK, SSP, KT, TW, S, YL, TP)	5 (MK) 3 (KT) 2 (SSP)	6 (MK) 3 (SSP) 4 (KT)	1 (MK)	42	

Averaging time	Ozone	RSP		Nitrogen dioxide			Total
	1-hr	24-hr	1 year	1-hr	24-hr	1 year	
					1 (TP) 1 (KC)		
High Growth (High End) with additional measures	3 (S)	2 (MK) 1 (S) 1 (KT)	6 (MK, SSP, KT, TW, YL, TP)	4 (MK) 3 (KT) 2 (SSP)	5 (MK) 3 (SSP) 2 (KT) 1 (TP)	1 (MK)	34
Notes:							
(i) CW - Central/Western, MK - Mong Kok, SSP - Sham Shui Po, KT - Kwun Tong, KC - Kwai Chung, TW - Tsuen Wan, S - Sha Tin, YL - Yuen Long, TP - Tai Po							
(ii) Hourly concentrations which exceed the AQO more than three times per year will be considered as non-compliant;							
(iii) Daily concentrations which exceed the AQO more than once per year will be considered as non-compliant							

The analysis indicates that general improvements can be expected from the implementation of additional mitigation measures (ie those listed at the beginning of Section 8.2.5). This improvement is less significant for RSP than for NO₂. A significant percentage of the RSP emissions are generated from sources other than tailpipe emissions i.e. paved road dust. Such emissions are related to the number of vehicle-kilometre-travelled and cannot be readily reduced, except by traffic management to reduce traffic or physically removing the road dust to reduce the potential for resuspension.

Although improvements in air quality were predicted to arise from the implementation of the additional measures, exceedances of the AQOs are predicted to continue. The current emission control technology is unlikely to deliver major improvements especially for heavy goods vehicles which are significant contributors to NO_x and RSP emissions. It is evident that attaining a territory-wide improvement in air quality would require more than just the application of emission control technologies. Whilst this conclusion is demonstrated for the SAR as a whole, it is nevertheless acknowledged that at street level, emissions reduction techniques would yield significant benefits and should be implemented.

Of the pollutants addressed in the evaluation, RSP continues to be a major concern. It is anticipated that even with additional measures in place, non-compliances with the AQO for annual average concentrations would continue to be reported. This is attributed to the following:

- elevated background levels due to sources outside Hong Kong;
- the direct relationship between vehicle-kilometres-travelled and paved road dust emissions.

Tackling the continuing problems associated with ambient levels of RSP simply by addressing the transport sector in Hong Kong is unlikely to bring the AQMS into full compliance. Therefore, the cost effectiveness of mitigation measures required to