

檢討香港空氣質素指標及制定長遠空氣質素管理策略  
**Review of Hong Kong's Air Quality Objectives and  
 Development of Long-Term Air Quality Management Strategy**

**第一階段措施 Phase I Measures**

		可減少的排放量(公噸) Emission Reduction Potential (Tonnes)				成本效益分析 Cost – Benefit Analysis <sup>[1]</sup>		
		二氧化 化硫 SO <sub>2</sub>	氮氧 化物 NO <sub>x</sub>	可吸 入 懸浮 粒子 PM <sub>10</sub>	揮發 性有 機化 合物 VOC	成本 (百萬 元) Cost (\$M)	效益 (百萬 元) Benefit (\$M)	成本效 益比率 Benefit- Cost Ratio
1.	增加本地天然氣發電比例至 50%及採用其它減排裝置 Increase ratio of natural gas in local electricity generation to 50% with additional emission abatement measures	13,402	25,225	523	0	2,032 <sup>[2]</sup>	1,803	0.9
2.	提早淘汰舊式／污染嚴重的車輛(歐盟前期、歐盟 I 期及歐盟 II 期商業柴油車輛及專利巴士) Early retirement of aged / heavily polluting vehicles (pre-Euro, Euro I and Euro II commercial diesel vehicles and franchised buses)	0	3,102	300	184	3,882 <sup>[3]</sup>	24,344	6.3
3.	加快引進符合最新歐盟標準取代歐盟 III 期的商業柴油車輛(假設約為 50%) Earlier uptake of latest Euro standard for diesel commercial vehicles of Euro III (assumed to be about 50%)	0	743	75	24	2,668 <sup>[3]</sup>	6,134	2.3
4.	推廣使用混合動力車輛／電動車輛或其他性能相若的環保車輛(20% 私家車及 10% 專利巴士) Wider use of hybrid / electrical vehicles or other environmentally friendly vehicles with similar	15	216	7	173	4,326 <sup>[3]</sup>	2,417	0.56

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<b>排放上限及管制</b> Emission Capping and Control								
	performance (20% private cars and 10% franchised buses)							
5.	要求本地船隻使用超低硫柴油 Ultra low sulphur diesel for local vessels	675	0	18	0	378	6,331	16.7
6.	要求本地船隻採取脫硝裝置 Selective catalytic reduction for local vessels	0	304	0	0	249	74	0.30
7.	採用電氣化的空運地勤支援設備 Electrification of aviation ground support equipment	85	759	21	67	224	3.8	0.02
8.	管制非道路使用的車輛／設備的廢氣排放 Emission control for off-road vehicles / equipment	4	950	239	326	845	2,123	2.5
9.	加強管制密封劑及黏合劑排放的揮發性有機化合物 Strengthening VOC control for sealant and adhesives	0	0	0	700	18	124	6.9
<b>交通管理</b> Transport Management								
10.	在中區、旺角及銅鑼灣設立低排放區(禁止歐盟前期、歐盟 I 期、歐盟 II 期及歐盟 III 期的商業車輛進入) Low emission zone (banning pre-Euro, Euro I, Euro II and Euro III commercial vehicles) for Central, Mongkok and Causeway Bay	Note <sup>[4]</sup>	Note <sup>[4]</sup>	Note <sup>[4]</sup>	Note <sup>[4]</sup>	3,696	2,586	0.7
11.	在中區、旺角及銅鑼灣設立不准車輛進入區／行人專用區 Car-free zone / pedestrianisation scheme for Central, Mongkok and Causeway Bay	Note <sup>[4]</sup>	Note <sup>[4]</sup>	Note <sup>[4]</sup>	Note <sup>[4]</sup>	42	400	10

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<b>排放上限及管制</b> Emission Capping and Control								
12.	重整巴士路線 Bus route rationalization	4	156	7	9	14	548	39
<b>基建發展和規劃</b> Infrastructure Development and Planning								
13.	擴大鐵路網絡 Expand rail network	17	501	46	207	Note <sup>[5]</sup>	3,850	Note <sup>[5]</sup>
14.	連接主要公共交通樞 紐的單車徑網絡 Cycling network to major public transport hubs	0.1	2.3	0.1	0.1	836	8	0.01
<b>提高能源效益</b> (大部分屬節省的能源成 本) Energy Efficiency Measures <sup>[6]</sup> (mostly savings in energy cost)								
15.	強制實施《建築物能源 效益守則》 Mandatory implementation of Building Energy Codes	151	256	8	3	95	2,634	28
16.	推廣使用高能源效益 的家用電器 Energy efficient electrical appliances for domestic use	84	142	4	1	84	2,277	27
17.	採用發光二極管作街 道照明 LED for street lighting	3	5	0.1	0	47	105	2.2
18.	推廣植樹／綠化屋頂 Tree planting / roof-top greening <sup>[7]</sup>	Note <sup>[8]</sup>	Note <sup>[8]</sup>	Note <sup>[8]</sup>	Note <sup>[8]</sup>	6,357	1,603	0.3
19	在啓德發展區設立區 域供冷系統 District cooling system for Kai Tak Development	6	16	0.5	0.2	2,788 <sup>[9]</sup>	4,047	1.5

[1] 最簡單來說，每項政策的成本效益都可以金錢估值及計算。成本效益分析也視乎顧問整理不同管制措施的評估結果時所作的種種假設。由於有關假設或會改變，應審慎研讀成本效益分析結果。然而，分析能提供有系統的框架，以便比較不同管制措施可能產生的成本效益。

In its simplest form, the costs and benefits of each policy are quantified and valued in monetary terms. The cost-benefit analysis is subject to a wide range of assumptions used by the consultants for compiling the assessment of different control measures. As these assumptions are subject to change, the findings of the cost-benefit analysis should be read with caution. Nonetheless, it

provides a systematic framework to compare the potential cost-effectiveness of different control measures.

- [2] 數目只包括因增加本地天然氣發電比例至 50%的費用。由於採用額外減排裝置的費用需要作進一步評估，因此並不包括在這數值內。

The figure includes estimated costs due to increasing the ratio of natural gas in local electricity generation to 50%. It does not include estimates on additional emission abatement measures, which would be subject to further studies.

- [3] 提早淘汰相關車輛的成本，是以這些車輛的預知剩餘價值除以這些車輛正常可使用期的餘下時間計算而得。購置新車所需的前期資金成本會高於表列的款額。

The cost of early retirement of the concerned vehicles is calculated based on the residual value foregone of these vehicles over the remaining period of their normal serviceable life. The upfront capital costs required for procuring the replacement vehicles would be higher than the figures set out in the table.

- [4] 由於措施主要涉及把某處的排放量轉移到別處，可減少的排放量不大。

Emission reduction potential would not be substantial as it involves mainly transferring emission from one place to another.

- [5] 鐵路策略包括港島北線、觀塘延線、九龍南線及沙田至中環線。鐵路策略會連帶改善空氣質素。此處只列舉效益。

The railway strategy includes North Island Line, Kwun Tong Line Extension, Kowloon Southern Link and Shatin Central Link. The railway strategy will have additional ride-on effect on improvement of air quality. Only benefit is presented.

- [6] 效益包括在物料損耗、節約能源、急性及慢性疾病方面的好處。策略 15、16、17 及 19 的效益大多關乎節約能源，不是改善健康。

Benefits include material damage, energy saving, acute and chronic health benefits. For strategies 15, 16, 17 and 19 the majority of benefits are due to energy savings, not health benefits.

- [7] 當局並無本地相關的排放及成本的數據。估計數字是根據有關外國綠化屋頂(佔市區面積 10%)的數據推算而得。

No local emission and cost data. Estimates are based on overseas data for roof top greening of 10% of the urban area.

- [8] 建議措施有助減低城市熱島效應，令空氣污染物加速消散。當局並無可減少排放量的資料。

The proposed measures help reduce urban heat island effect and improve the air pollution dispersion. Emission reduction potential is not available.

- [9] 數目包括設備所需的投放資金及未來50年的營運成本。

The figure includes both the capital and operational costs of plant for the coming 50 years.