

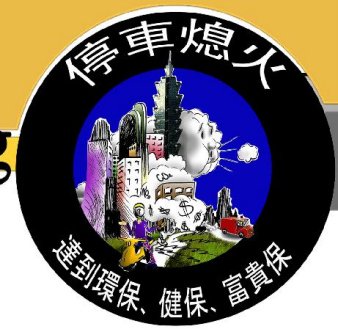


5

reasons to idling



五個不要怠速的理由



1. HHealth effects of air pollution 空氣污染對健康的影響

交通廢氣是台灣市區空氣污染主要的來源。這些污染對空氣品質跟民眾健康有很大的影響。¹ 交通造成的空氣污染對健康的影響很多，包括“心血管疾病，哮喘，慢性肺疾病，肺癌和糖尿病”² 呼吸困難，過敏性疾病，對懷孕和生育的問題，對男性生育能力的影響，致死的風險，心肺問題，增加心臟發作的可能性，並改變自律神經系統。³ 怠速時車內的通風不良會導致毒性污染物的累積。⁴ 車輛怠速時造成的污染和車輛行駛中造成的污染是同等。⁵ 摩托車跟機車造成的污染通常比汽車造成的污染還要多。⁶ 小孩特別容易受到空氣污染的傷害。⁷ 很多父母跟校車司機接送小孩子時會怠速。因此學校附近是怠速污染的重點區域。⁸ 結論：怠速是一個嚴重的問題。改善學校區怠速的問題是特別重要。

2. AAcceleration of global warming 加速地球暖化

怠速超過 10 秒鐘比重啓引擎更耗油，二氧化碳排放量更大。⁹ 每燃燒一加侖汽油會產生 25 磅二氧化碳跟其他暖化氣體。¹⁰ 一輛車怠速五分鐘就會產生 0.25 公斤（271.4 克）以上的溫室氣體。¹¹

3. Noise pollution 噪音污染

怠速會產生噪音。根據研究，交通噪音對小孩子的身心健康有負面影響¹²，也會影響工作品質，影響體內的生物化學機制，也會容易緊張，血壓升高，跟加速脈搏頻率。¹³

4. Depletion of natural resources 自然資源的消耗

汽車怠速一小時會消耗 1/5 到 7/10 加侖的汽油。柴油卡車怠速一小時會燃燒一加侖左右的汽油。⁴

5. Savings loss 金錢損失

估計在美國如果能減少怠速一輛車，一年內可以節省 \$ 70 到 650 美元（NT 1,824 到 NT 19,761: 2014 年 1 月的匯率）。⁴ 估計在英國如果能減少怠速每年就可讓公司節省 33 億英鎊（NT 1648.8 億: 2014 年 1 月的匯率）。¹⁴ 怠速比重新發動更會傷害引擎。低速運轉(怠速)造成內部零件的磨損是平常速度駕駛的磨損的兩倍，因此怠速會增加保養成本，也會縮短引擎的壽命。¹⁵

Save the Earth. The key is in your hands.

愛護地球。關鍵掌握在你手裡。

Information sources 參考資料

(1) Environmental Protection Agency in Taiwan. (2010). Control of mobile sources of air pollution (移動污染源管制). Retrieved 01/02/2014 from: <http://www.epa.gov.tw/en/epashow.aspx?list=99&path=128&guid=8d668c67-e27f-4a96-ac41-323149899ff2&lang=en-us> (2) John Wargo, Ph.D., Linda Wargo, M.S., Nancy Alderman, M.S. (2006). (The Harmful Effects of Vehicle Exhaust. A Case for Policy Change. Environment & Human Health, Inc. Retrieved January 2014 from: <http://www.ehhi.org/reports/exhaust06.pdf> (www.ehhi.org) (3) Krzyzanowski, M., Kuna-Dibbert, B., & Schneider, J. (2005). Health effects of transport-related air pollution. WHO Europe. Retrieved January 2014 from: http://www.euro.who.int/_data/assets/pdf_file/0006/74715/E86650.pdf (4) Environmental Defense Fund. Attention drivers! Turn off your idling engines. Retrieved January 2014 from: <http://www.edf.org/transportation/reports/idling> (5) Clean Air Network Briefing Paper on the Motor Vehicle Idling (FIXED PENALTY) Bill. (n.d.). <i>Hong Kong Clean Air Network</i>. Retrieved March 22, 2014, from [http://www.hongkongcan.org/doclib/Briefing%20Paper%20on%20Motor%20Vehicle%20Idling%20\(English\).pdf](http://www.hongkongcan.org/doclib/Briefing%20Paper%20on%20Motor%20Vehicle%20Idling%20(English).pdf) (6) Vasic, AM, & Weilenmann, M. (2005) Comparison of Real-World Emissions from Two-Wheelers and Passenger Cars. *Environmental Science and Technology*, 40 (1), 149–154. Retrieved January 2014 from: http://www.researchgate.net/publication/7340852_Comparison_of_real-world_emissions_from_two-wheelers_and_passenger_cars (7) Kleinman, MT. (2000). The Health Effects Of Air Pollution On Children. South Coast Air Quality Management District. Retrieved January 2014 from: http://www.aqmd.gov/forstudents/health_effects_on_children.html (8) United States Environmental Protection Agency. Idle Free Schools. Retrieved January 2014 from: <http://www2.epa.gov/region8/idle-free-schools> (9) Government of Canada. Natural Resources Canada. (2013). Emission impacts resulting from vehicle idling. Retrieved January 2014 from: <https://www.nrcan.gc.ca/energy/efficiency/communities-infrastructure/transportation> (10) Union of concerned scientists. (2014). 1 gallon of gas = 25 pounds of global warming emissions. Retrieved January 2014 from: http://www.ucsusa.org/clean_vehicles/why-clean-cars/global-warming/ (11) Idle Facts Smog Summit. (n.d.). clean air partnership. Retrieved March 25, 2014, from <http://www.cleanairpartnership.org/idle/idle> (12) Cornell University. (2001). Researchers Find Everyday Traffic Noise Harms The Health And Well-Being Of Children. ScienceDaily. Retrieved January 2014 from: www.sciencedaily.com/releases/2001/05/010523072445.htm (13) Ising, H., Dienel, D., Günther, T., & Markert, B. (1980). Health effects of traffic noise. *International Archives of Occupational and Environmental Health*, 47(2), 179-190. Retrieved January 2014 from: <http://www.ncbi.nlm.nih.gov/pubmed/7440003> (14) Fleet News. (2013). Engine idling costs businesses £3.3 billion in wasted fuel per year. Retrieved January 2014 from: <http://www.fleetnews.co.uk/news/2013/8/21/engine-idling-costs-businesses-33-billion-in-wasted-fuel-per-year/4805> (15) EPA New England. (2002). What You Should Know About Truck Engine Idling. Retrieved January 2014 from: http://www.epa.gov/region1/eco/diesel/pdfs/Diesel_Factsheet_Truck_Idling.pdf

Peacemakerfoundation.com