

#### 1. Health effects of air pollution

'Emissions from motor vehicles ... have a severe impact on air quality and public health.' Air pollution from vehicles has many health effects including 'cardio-vascular disease, asthma, chronic obstructive pulmonary disease, lung cancer, and diabetes,' respiratory problems, allergic illnesses, pregnancy and birth problems, influence on male fertility, risk of death, cardiopulmonary problems, increased risk of heart attack, and changes in the autonomic nervous system. 'Idling vehicles suffer from less ventilation inside the vehicle leading to a toxic buildup of pollutants.' Idling vehicles can create far more pollution than if they were moving. Motorbikes and scooters often emit far more pollution than cars. Children are particularly susceptible to the effects of pollution. Many parents and school bus drivers idle their engines when they drop off and pick up their children from school creating pollution hot spots.

Conclusion: Idling is a serious problem. It is especially important to stop idling around schools.

#### 2. Acceleration of global warming

'Idling for over 10 seconds uses more fuel and produces more CO2 emissions than restarting your engine.' Every gallon of gas burned emits nearly 25 pounds of carbon dioxide and other global-warming gases into the atmosphere.' A vehicle idling for five minutes produces more than a quarter kilogram (271.4 grams) of the greenhouse gases that are destabilizing our planet's climate patterns.'

# 3. Noise pollution

Idling is noisy. Research indicates that traffic noise 'harms the health and well-being of children,' impacts work quality and bio-chemistry, and increases tension, blood pressure and pulse frequency. 13

## 4. **D**epletion of natural resources

'An idling car uses between 1/5 to 7/10 of a gallon of fuel an hour. An idling diesel truck burns approximately one gallon of fuel an hour.'5

# 5. Savings loss

In America it is estimated that reducing idling would generally save between US\$70-650 (NT 1,824 - 19,761 as of January 2014) a year for one vehicle.<sup>5</sup> In the UK it is estimated that reduction of idling 'could save businesses as much as £3.3 billion per year in fuel' (NT 164.88 billion as of January 2014).<sup>14</sup> 'Letting an engine idle actually does more damage to the engine than starting and stopping. Running an engine at low speed (idling) causes twice the wear on internal parts compared to driving at regular speeds, which can increase maintenance costs and shorten the life of the engine.'<sup>15</sup>

## Save the Earth. The key is in your hands.

#### Information sources

(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, MES., Nancy Alderman, MES. (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/exhaust/exhaust/6.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) Clean Air Network Briefing Paper on the Motor Vehicle Idling (FIXED PENALTY) Bill. Hong Kong Clean Air Network. Retrieved March 22, 2014, from http://www.hongkongcan.org/doclib/Briefing%20Paper%20on%20Motor%20Vehicle%20Idling%20(English).pdf (5) Environmental Defense Fund. Attention drivers! Turn off your idling engines. Retrieved January 2014 from: http://www.edf.org/transportation/reports/idling (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 realworld 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: http://www.nrcan.gc.ca/node/4415 (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/idlefree\_appendices1to4.pdf (12) Cornell University. (2001). Researchers Find Everyday Traffic Noise Harms The Health And Well-Being Of Children. ScienceDaily. Retrieved January 2014 from: http://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-33billion-in-wasted-fuel-per-year/48058/ (15) EPA New England. (2002). What You Should Know About Truck Engine Idling. Retrieved January 2014