

## Alternative Fuel for Cleaner Air and Better Health

## The Philippines

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### The Philippines



### Background

Every hour, 2.029 million liters of gasoline are consumed, with one kilometer of road built or repaved to accommodate the 47 new vehicles which are registered during the same period. Every hour, P53,000 (pesos) is spent to treat pollution-related diseases and to compensate for productivity losses. Every hour, 2,200 metric tons of carbon dioxide is pumped into the air, a carbon footprint which requires the planting of 56,000 trees to absorb all that poison. Every hour, traffic jams in Metro Manila alone cause P16 million in economic losses. Every hour, four Filipinos die from dirty air.

The Department of Health (DOH) has warned of a higher incidence of noncommunicable diseases (NCDs) caused by the worsening air pollution in the metropolis. Air pollution is an important issue often overlooked. It is an on-and-off topic that is often forgotten.

Most NCDs, such as allergies, acute respiratory infections, chronic obstructive pulmonary diseases (COPD), cancer and cardiovascular diseases, are attributable to air pollution.

### Quick facts

Zone	National territory
Topic	Green Transportation
Implementing Agency	Department of Environment and Natural Resources (DENR) and Asian Development Bank (ADB)



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There is a misconception that heart disease, cancer and pulmonary diseases are illnesses exclusive to the rich. Attention must be stressed to the unhealthy effects of the constant exposure of the public, particularly pedestrians and those who work on the streets, to air pollution.

Based on the 2006 National Emission Inventory of the Department of Environment and Natural Resources (DENR), 65 percent of air pollution comes from vehicles while 21 percent each comes from stationary sources, such as factories and waste burning. Of the top 10 leading causes of mortality in 2008, three were NCDs related to air pollution, such as chronic lower respiratory diseases, heart disease and pneumonia.

Based on the study, P52 million was lost due to reduced work days of employees afflicted with acute lower respiratory infection/pneumonia, chronic obstructive pulmonary disease (COPD) and cardiovascular diseases. The study also found that P910 million was spent on hospitalization and medical expenses for the treatment of NCDs.

The primary modes of public transportation in Philippines are Jeepneys, tricycle and buses, particularly in Metro Manila. Most often, these public utility vehicles (PUV) are fitted with old, if not second hand engines resulting in the production of more pollutants in the air. As an answer to the growing needs for an alternative fuel and cleaner air, some municipalities in Metro Manila have made an initiative to push for a greener community.

Electric vehicles have been in operation in the Philippines since 2007, when electric three-wheelers were introduced in Metro Manila. The City Government bought the pitch by the proponents of the E-Trike and supported their trial operations that have since expanded, but are yet to be legitimized due to the vehicles not being registered with the Land Transport Office.

Meanwhile, around the same time, another electric vehicle was introduced in the Visayas, Southern Philippines. In this case, the vehicle was in the form of a national icon – the jeepney. Electric jeepneys were first built out of China

and directly imported as a “proof of concept.” What was initially launched was examined by local partners based in Manila, and eventually a locally manufactured E-jeepney came out in 2009. Together, the E-jeepney and the E-trike represent the strongest cases for electric vehicle applications in public transport. Other initiatives from the government are also pushing for hybrid and electronic buses.

### Suggestions for Future Initiatives:

- 5 year plan of phasing out high emission old Public Utility Vehicles
- Stiff tax penalties for old vehicles
- Large amount of government subsidy on procuring/installing natural gas vehicles (NGV) or Compressed Natural Gas (CNG) and hybrid electric vehicles for public utility transportation
- Regulating and limiting the number of registered PUVs in each routes to minimize congestions
- Increased air pollution awareness for all drivers (such as annual seminars and requirements in renewing driver’s license)
- Government Awareness by media advertisement, posters, brochures and video presentations
- Tax incentives for the owners of Green vehicles or transportation

### Conclusion

Reducing fossil fuel use now will ensure low transport costs in the long run and safer, cleaner air for everyone.

### References:

2006 National Emission Inventory of the Department of Environment and Natural Resources (DENR): <http://www.denr.gov.ph/index.php/home.html>

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Asian Development Bank (ADB) Video presentation - New Electric Vehicles First Step Towards Green Transportation Revolution in Philippines - Electric Tricycle: <http://www.adb.org/news/videos/new-electric-vehicles-first-step-towards-green-transportation-revolution-philippines>

