

Singapore Government **MEDIA RELEASE**

SPEECH BY DR YAACOB IBRAHIM, MINISTER FOR THE ENVIRONMENT AND WATER RESOURCES, AT THE COMMITTEE OF SUPPLY DEBATE 2005 - PART 2, 8 MARCH 2005, 4.00 PM

PART 2:

Improving Energy Efficiency and Carbon Intensity

Prof Low and Dr Geh Min have asked about our long-term plans to improve energy efficiency and carbon intensity, including our initiatives to encourage energy efficient vehicles.

2 Let me just give some background information. Singapore has since 1997 ratified the UN Framework Convention on Climate Change and is committed to becoming more carbon efficient. We welcome the Kyoto Protocol initiative, which translates the Convention into concrete actions. The Kyoto Protocol came into effect on 16 Feb 2005, following the ratification by Russia. We are currently studying the timing of our accession to the Kyoto Protocol.

3 Prof Low can be assured that we believe in promoting energy efficiency as they benefit industries and Singaporeans. Being energy efficient not only lowers our carbon dioxide emissions and air pollution levels, it also lowers energy consumption and energy costs for both businesses and consumers. In the long run, this will help strengthen the competitiveness of our economy.

4 It is for these reasons that Singapore developed a strategy to mitigate the effects of climate change, with energy efficiency being a key component. As a sign of our commitment, we have set a national target to improve our carbon intensity, or the amount of carbon dioxide for each GDP dollar generated, by 25% from 1990 levels by the year 2012. Singapore's carbon intensity has already improved by 17% between 1990 and 2003; we target to improve it by a further 8% point by 2012 by focusing both on the energy-supply and energy-demand sides.

5 On the energy-supply side, electricity generation companies (or gencos) have adopted advanced technologies such as combined cycle and co-generation technologies, which harness both electricity and heat in the generation process. This will achieve greater efficiency compared to conventional oil-fired power plants. Gencos are also burning cleaner and less carbon-intensive fuels such as natural gas.

6 On the energy-demand side, we have introduced several energy efficiency improvement schemes to reduce energy use by industries, buildings and consumers. For the industry, companies that have put in place energy audits and energy conservation measures have already reaped benefits: for example, ST Microelectronics, as a result of its investment in energy saving equipment, has reduced electricity used to make a wafer by 40% while its production output has gone up almost three times! We will be introducing a new Energy Efficiency Assistance Improvement Scheme with a \$10 million fund, which companies can tap to conduct energy audits.

7 In the case of buildings and housing estates, we have worked with Town Councils and HDB to conduct energy audits for the common areas in HDB estates to cut down electricity wastage. We will be introducing a scheme later this year to give recognition to energy efficient buildings. I am

pleased to inform the House that several public agencies will also take the lead by participating in a pilot project to improve the energy efficiency of their buildings through energy audits and performance contracting.

8 For consumers, we have introduced energy labels for air conditioners and refrigerators to help buyers identify more efficient models. For example, using an air-conditioner with four ticks on the energy label can save a household about \$300 a year on electricity bills compared to one with two-ticks. If consumers find such information useful, we may even consider making labeling compulsory in the future.

Green Vehicles

9 For transportation, I agree with Dr Geh Min that green vehicles generate many positive externalities for the environment. Not only are they more energy efficient and emit less carbon dioxide, they also emit less air pollutants such as carbon monoxide and particulate matter. To encourage the switch to green vehicles, the Government introduced a Green Vehicle Rebate (GVR) scheme in January 2001 equivalent to 20% of the Open Market Value (or OMV). Unfortunately, the rebates have not been sufficiently attractive; as a result of this and the general lack of awareness surrounding green vehicles, there are only 24 green vehicles registered under the GVR scheme to date. The GVR scheme is up for review by end of this year. MEWR is currently reviewing the rebate with MOF to see how we can make it more attractive for environmentally-conscious people to purchase green vehicles.

10 At the end of the day, the decision to purchase a green vehicle is also a lifestyle choice. With growing awareness, better technology driving down costs, and more models available in the market, we hope that the take up rate of green vehicles will improve.

11 Of course, an even more environmentally (and traffic!) friendly option would be public transport as raised by Prof Low. Besides being more fuel-efficient than private cars, they also offer an affordable solution for the public to move around.

Diesel Engine Vehicles

12 Prof Low is right to say that CNG buses emit less air pollutants, especially fine particulate matter or PM2.5, than diesel buses. PM2.5 increases the risks of bronchitis and asthma, and may even lead to premature death. It is therefore a key concern in Singapore. Today, our PM2.5 levels do NOT meet the standards set by the US Environment Protection Agency (USEPA). If nothing is done, our PM2.5 levels are projected to further increase in the future. Last year we announced the introduction of Euro IV emission standards for new diesel vehicles from 1 October 2006 to lower our PM2.5 levels to USEPA standards. We expect to achieve these standards when about 80% of our diesel vehicles have moved to Euro IV. This can be accelerated if we have CNG or Euro IV vehicles on our roads early.

13 To encourage taxi and bus operators to switch early to Euro IV compliant vehicles, we also announced a tax incentive package for CNG and Euro IV taxis and buses. Under this package, CNG and Euro IV taxis can enjoy an ARF rebate of 100% OMV till 31 December 2005, and 80% from 1 January to 30 September 2006; while Euro IV diesel or CNG buses will be completely exempted from paying the Additional Registration Fee of 5% of the OMV till 30 September 2006. CNG buses and taxis also enjoy a 20% road tax rebate till 31 December 2005. These are some of the initiatives we have put in place to encourage the switch so that we can control the PM2.5 pollutants in the air.

14 Mr Andy Gan suggested that the punitive road tax on diesel cars be removed. Although advances have been made in diesel engine technology, studies in Europe and the US have shown that diesel vehicles generally emit higher levels of PM 2.5 and oxides of nitrogen than petrol vehicles. Petrol vehicles emit negligible PM2.5. In addition, unlike petrol vehicles, the emission performance of diesel vehicles is more dependent on whether and how the engines and pollution control devices are maintained. Therefore we should continue to discourage proliferation of diesel vehicles, especially diesel passenger vehicles.

15 To conclude, by retaining diesel road taxes and introducing Euro IV standards for new diesel vehicles, we hope to bring down our PM2.5 levels to within USEPA standards and make our ambient air cleaner for Singaporeans.