$= 102949972020\ kg$

$1.03 \times 10^{11}\ kg$

reducing, minimising...

It is demonstrated by the significantly high value above that the amount of gases released through vehicle emissions needs to be reduced to assist in the solution of ending global warming. In order to achieve this, e85 (up to 85% of ethanol and the remaining petrol) will be compared to petrol to determine whether ethanol would be more beneficial to Australia's economy.

Internationally, ethanol has a long history of use as a petrol extender, octane improver and alternative fuel which has been put forward as a means of reducing greenhouse gas emissions and alleviating adverse economic conditions in the sugar industry. At present it is being widely promoted as a clean and renewable fuel that could reduce global warming, air pollution and reliance on diminishing reserves of fossil fuel. Ethanol (ethyl alcohol) is a clear, colourless liquid, generally manufactured from grain or sugar. Currently around 90% of Australia's ethanol is produced from wheat.

In text referencing!

However, ethanol is corrosive to car engines and fuel line and using ethanol above 10% would require certain modifications and design specifications to vehicles. Flexible-fuel vehicles (FFVs) can operate on neat petrol or fuel that contains 85 per cent ethanol by volume. The main differences between FFVs and petrol vehicles are the materials used in the fuel management system and modifications to the engine calibration system. Misfuelling with E85 may occur in the marketplace due to a lack of consumer awareness and primarily because the price of Bio E-Flex and other E85 automotive fuel products are expected to be significantly below that of regular unleaded petrol by approximately 20 cents per litre. Misfuelling could lead to engine damage, inconvenience to consumers and potentially, risks to consumer safety.

In addition to this, ethanol has a significantly lower heat of combustion. This means that more ethanol would be required to travel the same distance as when using petrol. A greater temperature is also required for combustion to occur because ethanol has a higher flash point than that of normal petrol. Furthermore, ethanol is more expensive to produce than hydrocarbons used for fuel such as octane and large areas of land would be needed to grow the biomass needed to produce the ethanol. This can cause environmental problems such as soil erosion, land clearing and deforestation as well as result in losses of large amounts of arable land.

Regardless of this, there are various advantages to incorporating ethanol (e85) as Australia's new alternative fuel to reduce vehicle emissions. Using ethanol as a vehicle fuel has measurable greenhouse gas emissions benefits compared with using petrol. Carbon dioxide (CO_2) released when ethanol is used in vehicles is offset by the CO_2 captured when crops used to make the ethanol are grown. As a result, FFV's running on ethanol produce less net CO_2 than conventional vehicles per kilometer travelled.

Also, ethanol can be produced by the fermentation of glucose, making it a more desirable fuel source as it can be produced from renewable glucose. The presence of oxygen in the molecule means that combustion is almost always complete and therefore there is a reduction in polluting forms such as CO_2 and soot. It also means that toxic additives which help petrol burn evenly by providing oxygen do not need to be added to the fuel.

You have not referred to the statement at all in this page. It also questions your justification ----