Natural gas is one answer to Brisbane's smog

Motor vehicle emissions account for half of all Brisbane's air pollution and 70% of gases which form smog.

According to the Brisbane Air Quality Strategy, the vehicle kilometres travelled in the region are growing at over twice the rate of population growth.

Vehicles in South East Queensland emit around 1500 tonnes of particulates and gases per day. At the present rate of high population growth and vehicle use, this could double over the next ten years and severely affect the air quality of South East Queensland.

Brisbane has Australia's highest potential for smog. The warm temperatures and mountains encircling south-east Queensland make it prone to air pollution, both the photochemical smog which forms as nitrous oxide gases react with the ultrav-violet light of the sun and the brown urban haze which is caused by dust, smoke and particulates from diesel engines.

Brisbane city has now switched almost half its bus fleet to natural gas, which is almost free of nitrous oxides and particulates. The big question is why do we not use natural gas as a fuel for all vehicles?

Australia is running out of oil and by 2015 there will be a need to import around 1 million barrels of oil a day if we do not switch to alternative fuels. Such massive imports would cripple our balance of payments and cause interest rates to rise.

Despite having very little oil, we have large supplies of natural gas in Queensland. It is the only 'volume' alternative to petrol and diesel which can significantly reduce both air pollution and the cost of fuel. It makes sense to use it in vehicles to replace imported oil.

Natural gas is a clean burning, high octane fuel, which can be used in both petrol and diesel engines. The Brisbane City Council buses which run on natural gas are quieter and do not generate diesel smoke. Natural gas does not need refining and when water is removed can be used almost straight out of the ground. Greenhouse gas emissions are reduced by around 30%, but there is a 90% reduction in the emission of other pollutants.

But is the use of natural gas in vehicles feasible? The experience from many other countries around the world suggests it is. According to the International Association of Natural Gas Vehicles (IANGV), there are now more than 5 million vehicles running on natural gas. Argentina and Brazil have led the way but countries, such as Thailand, Malaysia and Italy are moving quickly to have a significant portion of cars running on natural gas. Australia seems to be well behind the rest of the world, as we are with renewable fuels.

It will take some time to develop a network of gas filling stations around Australia. But fleet users and farmers could start using it now if a distribution system using portable gas pods or tanks was set up. Such a system is in use in Argentina where there are now more than 1.5 million natural gas vehicles.

One option for residents with reticulated gas, is for people to fill up their cars with natural gas from household supplies. In California, small gas pumps which fit on the garage wall like hot water systems are now used by motorists to fill their cars with natural gas.

Apart from a lack of filling stations, the major problems with natural gas is conversion cost and the large tanks which need to be installed in vehicles. This is not a serious issue for most commercial vehicles, but motorists would prefer not to lose half their boot space. Vehicle manufacturers are becoming much more clever about this, and have found ways to fit several small cylinders in unused space, rather than filling the boot. In overseas countries there are many vehicles now produced, 'factory ready' for natural gas.

The California Government is providing incentives to motorists to convert to natural gas as a measure to reduce air pollution. Natural gas is being promoted by governments in Thailand and India for the same reasons, along with the potential to save money on importing petrol.

Natural gas needs to be seriously considered as a solution to air pollution in Queensland. It is even more attractive here because our natural gas is much cheaper than petrol. As we run out of oil in this country it does not make sense to import large amounts of petrol when we have fuel in our own backyard.