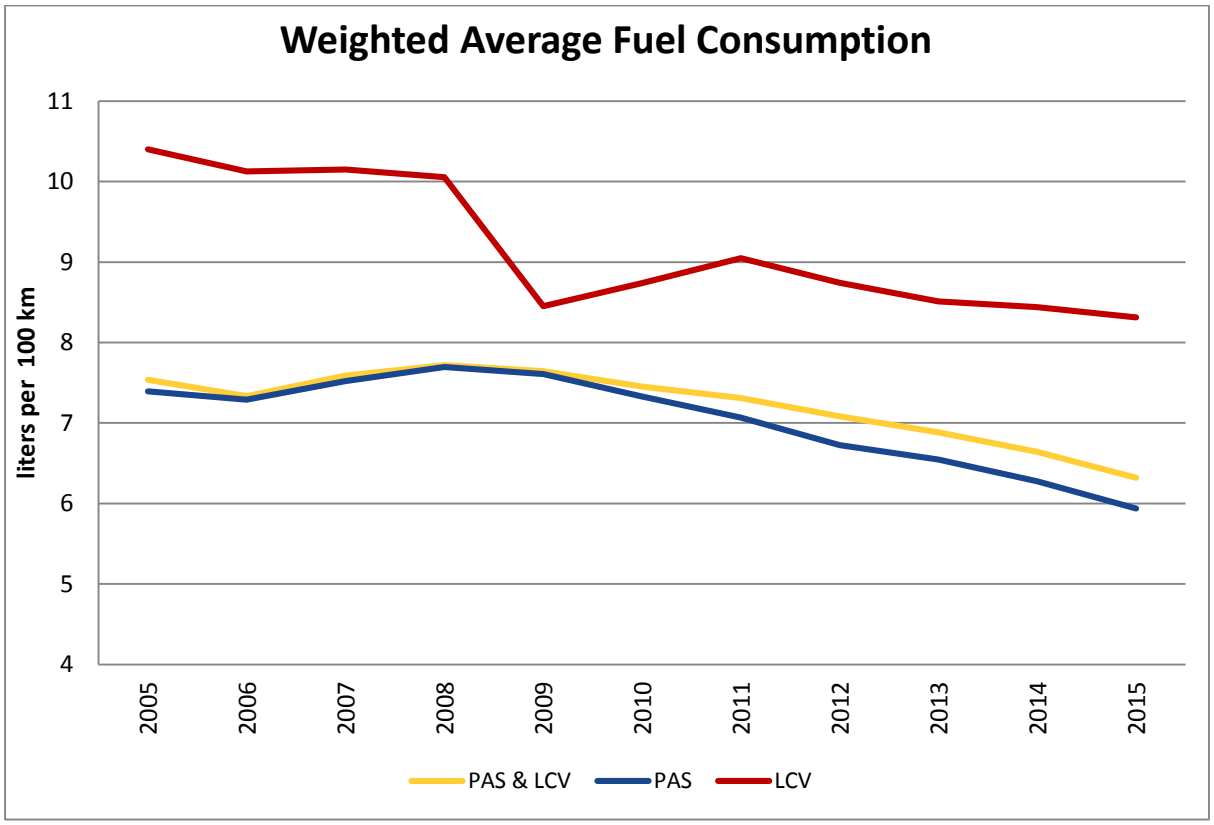
Does size *really* matter?

The advancement of technology in our modern age has had a drastic impact on processes across industries, and none more so than in the motor industry.

The latest Lightstone data looks at Weighted Average Fuel Consumption of vehicles between 2006 and 2015, and it is interesting to note that vehicles across the board have streamlined processes and efficiency to provide motorists with more bang for their (fuel) buck.



In 2006, the weighted average fuel consumption of Passenger (PAS) vehicles was at 7.19 litres per 100km's, and in August 2015 that number dipped to 5.86 litres per 100km's. Light Commercial Vehicles (LCV) average fuel consumption in 2006 was 10.3 litres per 100km's, and in 2015 this decreased to 8.42 litres per 100km's.

Possible factors contributing to this could include: strict emissions standards abroad; the availability of cleaner fuel such as 20ppm diesel; and the manner in which fuel gets into an engine and how it is used, has improved greatly, thus allowing for greater efficiency in an engine. This is all great news for motorists as it means they are getting more mileage (from their fuel and motor vehicle) at a lower cost when compared to nine years ago.

Lightstone's data also looked at the average kilowatt per engine size (in litres) and it is evident that there was an increase of roughly 3kW's between 2003 and 2007. Bigger engines no longer mean better. The bigger the size of the engine, the more fuel is burnt and more by-products emitted, ultimately resulting in higher emission tax to be paid by manufacturers to produce a vehicle. Manufacturers realised the higher emissions tax they had to pay, the less profits they would ultimately make, so they started to make smarter decisions when it came to engine development and adding more power to their existing, smaller engines. Post 2007, the average kW's per engine increased quite substantially. In 2015, PAS vehicles have an average of 69.5kWs, whereas in 2005 they were sitting on 53.8kWs. That's a 14.5% increase over eight years. Light Commercial Vehicles were at 36.2kW's in 2007, and increased to 41.3kW's in 2015 – a 5.1kW difference.

Year	Average kW per engine size (litre)		
	PAS & LCV	PAS	LCV
2015	66.9	69.5	41.3
2014	62.7	66.6	42.4
2013	61.8	65.5	42.8
2012	61.5	65.1	42.3
2011	60.5	64.0	41.9
2010	59.1	61.7	42.1
2009	54.5	57.8	39.4
2008	55.8	58.5	37.3
2007	52.8	56.0	36.2
2006	52.4	54.9	37.8
2005	51.3	53.8	39.2
2004	50.1	51.8	34.0
2003	50.5	52.8	34.6
2002	47.8	50.9	35.0
2001	50.9	51.7	33.9
2000	50.6	53.3	32.4
1999	45.7	47.7	31.9
1998	44.8	46.8	34.5
1997	43.6	47.2	31.1
1996	46.7	48.0	33.2
1995	43.0	45.8	29.6
1994	44.5	47.7	34.0
1993	39.9	46.8	32.5
1992	46.4	47.7	31.8
1991	34.6	35.3	32.5
1990	41.4	43.7	32.3
1989	43.5	43.8	31.8
1988	41.6	43.6	31.2
1987	38.2	39.5	32.0

“Engine manufacturers have moved away from increasing combustion chamber size, and have begun to increase power. These days it is all about getting maximum combustion percentage from each fuel-air mix particle, meaning that the size of the combustion chamber is not so important for road-faring motor vehicles any longer. This is not something new. Motorcycle engine manufacturers have achieved this for some years now, their 998cm engines can generate 150Kw,” says Heinrich Coetzee from Lightstone Auto.

There are many factors that affect how much fuel a car needs, including: tires, road surfaces, temperature, driving style, driving conditions, elevation and atmospheric pressure, grade of fuel, and break-in of the engine, to name a few.

With this technology trend, and engine efficiency having improved, we are well on our way to more economical, and powerful vehicles, without compromising on engine quality and cost. And while the weak Rand may have a substantial effect on the price of fuel, it’s good to know that motorists are at least still getting more mileage out of their vehicles (and fuel) in the long run.