

LONMIN

# THE GREEN BRICS ROAD

Ben Magara, CEO, Lonmin Plc



*“The inhabitants of Lagos, Shanghai, Mumbai or Johannesburg are just as entitled to clean air as the residents of Paris or Chicago.”*

As one of the three largest producers of Platinum Group Metals (PGMs) in the world, our fortunes are closely tied to the automotive industry which is expected to account for 59 percent of the total PGM demand in 2015. This is due to the rise of the catalytic converter, a cylinder whose honeycomb-like structures are coated with compounds of platinum, palladium and/or rhodium (aka PGMs). When fitted to the tailpipe, they prevent harmful pollutants including carbon monoxide, hydrocarbons, oxides of nitrogen and particulate matter from being released into the atmosphere. It is largely due to this humble device that Europe and the USA have been able to impose ever more stringent emission regulations to the benefit of both the population and the planet.

But as the developed economies are preparing to take their emissions legislation to the next level, many emerging markets are barely out of the starting blocks. According to a recent study by McKinsey (October 2015), new vehicle sales to feed the appetite for car ownership among burgeoning middle class in Brazil, Russia, India and China are expected to cumulatively top 440 million come 2020.

This is just under half the number of vehicles currently in circulation around the globe. If we accept that transportation accounts for up to 30 percent of the developed world’s greenhouse-gas emissions, compared to 30 percent in less developed countries, then we simply cannot afford to ignore the implications. From climate change to mitigation and adaption perspective this presents policy makers with both a challenge and an opportunity. A challenge because these countries are generally between 4 to 10 years behind Europe in terms of a regulatory framework to govern emissions; and an opportunity because we are coming off a low base and the demand is only just starting to build at a time when vehicle sales in Europe and America are trending sideways.

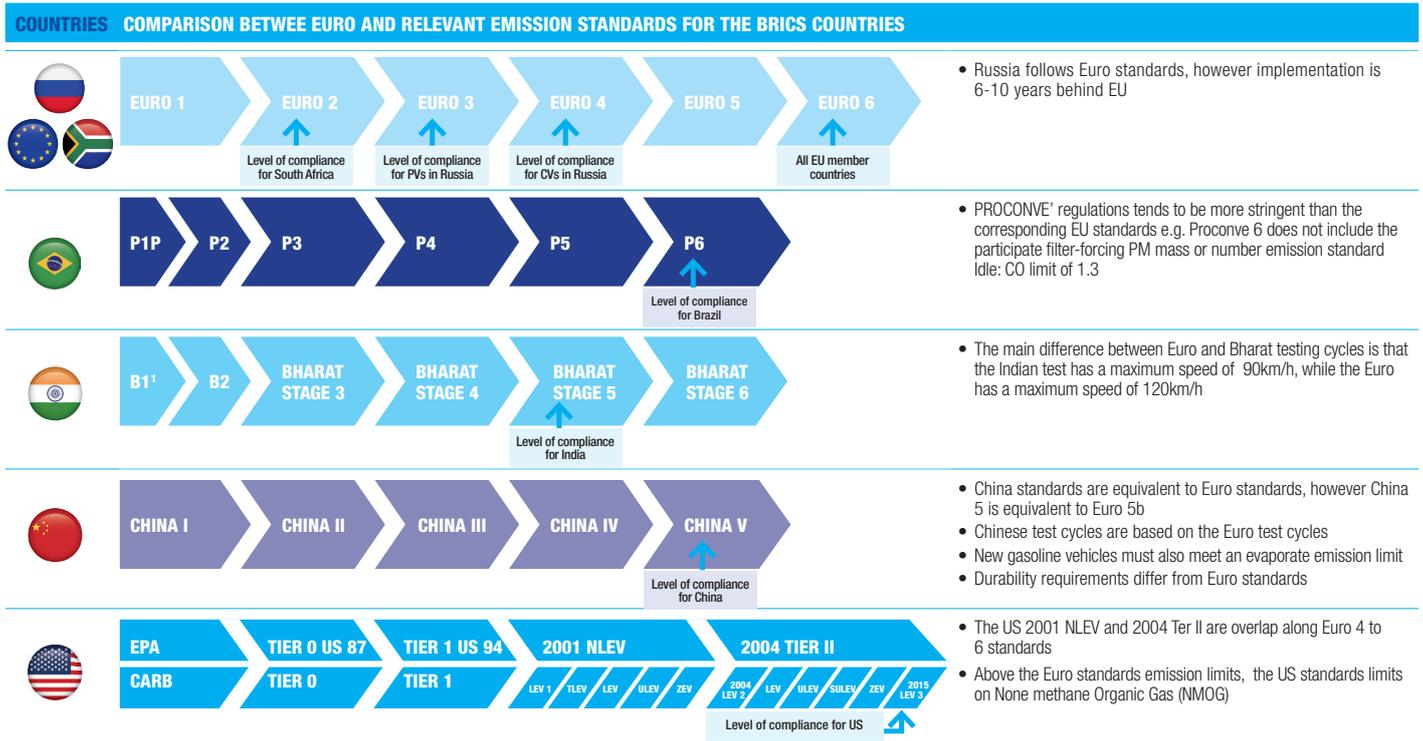
In Africa, where six countries (Nigeria, South Africa, Algeria, Angola, Egypt and Morocco) account for 71 percent of the continent’s 6.2 million vehicles, three of these countries have little to emissions controls, while Morocco leads the pack by virtue of the fact that 50 percent of its vehicles comply with Euro 4. In South Africa, the standard is currently Euro 2 for both diesel and petrol vehicles.

The picture is slightly better for the BRIC countries. With the exception of Russia who like South Africa has adopted Euro standard, the others have introduced their own emission standards, the most of ambitious of which are comparable to Euro 5.

What is urgently needed is a uniform policy around emission controls to align the emerging markets with global best practise. This will have a profoundly positive impact on the health and well-being of billions of people; while also bringing a measure of stability to the resource sector currently supplying the raw material to make this possible – in itself a worthy sustainability goal.

This is unlikely to be popular despite overwhelming evidence of the relationship between air quality and health. The introduction of effective emission controls carry cost implications to effect refinery upgrades as well as increasing the unit costs per vehicle, both of which are likely to be passed to the consumer. Currently, many Original Equipment Manufacturers (OEMs) do not include catalytic converters when exporting to Africa because poor fuel quality compromises vehicle performance.

# EMISSIONS REGULATIONS APPLICABLE IN THE BRICS, EU AND USA ARE COMPARABLE BUT NOT PRECISELY THE SAME AS EURO STANDARDS



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<sup>1</sup> Bharat stage 3 is equivalent to Euro 2 due to delay in implementation in India

<sup>2</sup> Euro 5b legislation introduced a particle number (PN) emission limit for compression ignition engines

SOURCE: Transport Policy.net team analysis. Delphi worldwide emission standards

**References:**

- <sup>1</sup> SFA (Oxford)
- <sup>2</sup> Intergovernmental Panel Climate Change
- <sup>3</sup> 2014: Migration of Climate Change

COP 21 presents us with the opportunity to implement harmonised global emissions legislations on par with Euro 6. This would address the high degree of complexity surrounding the current fragmented regulatory framework while ensuring that policy makers commit the necessary budget and resources to enforce the regulations.

To achieve this win-win situation, however, is going to take vision and leadership from a range of stakeholders- often with competing interests across thousands of square kilometres and we do not have the luxury of time. There is a very narrow window of opportunity at the Paris COP to ensure that development and the environment are not set on a collision course. The time is now for the Big Six African economies to join forces with the automotive OEMs, the oil and gas industry as well as international organisations such as the UN, World Bank, and the AU to deliver the developing world its Kyoto Moment and regulate and incentivise the implementation of globally harmonised regulations.

Promoting green alternatives such as public transport and the use of bicycles does not neutralise the aspirations of the emerging middle classes. Growth in the automotive industry is an important indicator per capita wealth with highly developed markets having the highest vehicle penetration. As the GDP per capita is set to rise in the emerging markets, so too will the demand for freedom, convenience and status in the form of a car of one's own. Even given the exciting work that is being done on fuel cell technology and other alternative powertrain forms, the hardy and relatively inexpensive internal combustion engine is going to be with us for some time.

If we wait till 2020, the citizens of some of the planets largest cities will be battling the long-term health effects of compromised air quality. The inhabitants of Lagos, Shanghai, Mumbai or Johannesburg are just as entitled to clean air as the residents of Paris or Chicago. To ignore this and allow governments to dodge responsibility to their people and the planet is a terrible double standard that will have implications for us all. There is indeed a solution to the World's emission challenge, it is platinum and its group metals. Platinum is a catalyst to a cleaner and green world.

**ABOUT THE AUTHOR:**

*Ben Magara joined the Lonmin Board as Chief Executive Officer on 1 July 2013, having held executive posts at Anglo Platinum prior to heading up Anglo Coal South Africa. A graduate Mining Engineer from the University of Zimbabwe. Mr Magara has an abiding interest in sustainable mining for a greener future.*