

Message from the Editor

This month has been car month for me, but looking in particular at cars that are less dependant on conventional fuels. I had the opportunity earlier this month to test drive the new Lexus Hybrid vehicle, which is marketed as a performance hybrid and at the top end of the car market. I also attended the launch of South Africa's first 100% electric car that is currently being launched to the international market at the Paris Motor Show, but more about that later. These two cars link in with the theme for this month's newsletter, which is Peak Oil. Increased awareness around Peak Oil and its potential impacts on the world, has meant that countries need to start looking at alternatives to our conventional fossil fuel dependent lifestyles and research into Post-Oil cities need to get some serious attention. I've asked Jeremy Wakeford, the Research Director for the South African Association for the Study of Peak Oil, to briefly discuss some of the potential impacts of Peak Oil on South Africa. For more information on this work and Peak Oil in general, have a look at www.aspo.org.za or the transit website. **Happy Transport Month**, and let's hope that Spring arrives soon (at least in Cape Town that is)

Lize

Potential Impact of Peak Oil on South Africa

Guest Author : Jeremy Wakeford (ASPO –SA)

Peak oil will affect South Africa via two main avenues: (1) directly through its impact on local fuel prices and availability; and (2) indirectly through its effect on the world economy and financial markets.

Petrol and diesel prices have trebled in nominal terms over the past 5 years. Because such a high proportion of our goods and services depend on road transport, fuel price increases have boosted overall consumer inflation and especially food prices. In response, the inflation-targeting Reserve Bank has raised interest rates 5 percentage points in just over two years, and may have to raise rates further in the future. Such action would continue to dampen economic activity and place additional financial pressure on the heavily indebted middle and lower income groups. Faced with rising production costs, businesses are liable to shed jobs.

Cost of transport fuels will continue to rise and at some point physical shortages will emerge; both trends will constrain people's mobility.

Food security will also become increasingly threatened. A key concern will be that farmers are able to afford sufficient quantities of the necessary fuels and fertilisers so as to maintain production, and that their produce continues to be distributed to cities and towns. Even if this is the case, rising fuel and food prices will impact severely on the poor, who spend a high proportion of their income on these items.

Safety and security will be of paramount importance, especially in metropolitan areas where youth employment and violent crime are already serious problems. Unaffordable prices or rationing of fuel might well spark social protests and perhaps even drastic responses by elements in the taxi industry, which has for many years been prone to episodes of violent conflict. To some extent the middle and upper classes will be able to make lifestyle adjustments to cope with higher fuel prices and shortages, although the poor state of public transport (in terms of availability and safety) in combination with suburban sprawl is a serious weakness. The high degree in inequality in the country is likely to fuel social tensions and pose significant challenges to local authorities.

What is Peak Oil

Peak Oil is the point at which the maximum global petroleum production is reached. After this point the rate of production will start to decline. The Hubbert Model shows that the production rate will follow a symmetrical bell-shaped curve. This does not mean that oil will suddenly run out, but the supply of the cheap conventional oil will drop and the prices of fuel will rise and continue to rise.

One way to mitigate the impact of peak oil is to conserve the oil that is currently being produced, by reducing consumption, by making use of alternative fuel sources and reducing our dependence on oil. The economic growth in China and India, and to a lesser extent in Africa and South America, has however meant that there is increased demand for oil, particularly in the transportation sector.

There is some speculation that the global oil production has, or will reach its peak in the next few years, although this can not be confirmed, as oil consumption does vary particularly when the oil price increases, therefore shifting the "peak" date.

Joule – South Africa's first Electric Car

Joule, South Africa's first all electric car developed by Optimal Energy, is a 6-seater Multi-Purpose Vehicle. This vehicle has been designed to accommodate two large-cell lithium ion battery packs, which will allow for a 400km driving range on one charge. One battery pack is however recommended for urban users, as they generally don't travel more than 150 km a day. Using a normal 220 volt home outlet and the onboard charger, it will take approximately 7 hours to recharge the battery for a 200km driving range. Regenerative braking, where the battery is charged by the energy generated in braking, will add to the car's range. Electric cars only require about 20% of the energy that a conventional car requires – this means that the total emissions are much less, even if coal-based electricity is used. With the trend towards more renewable and cleaner electricity, total emissions from electric cars will continue to shrink.



Joule has been designed as a vehicle for the urban driver and environment. The car is going into production near the end of 2010 and should be available in Johannesburg, Durban and Cape Town soon after that.

If you would like to contribute to this newsletter or if you have any comments or questions, please contact us at lize@sustainable.org.za or call 021 702 3622 and ask for Lize Jennings.

Practical Tip

The Department of Minerals and Energy have recently launched a vehicle labelling regulation, stating that all new vehicles have to include a label giving their fuel efficiency and CO₂ emissions. Pay attention to this when buying a new car and look for cars that have higher fuel efficiencies in order to reduce your fuel consumption.

Editor's Choice

Peak Everything : Wake Up to the Century of declines by Richard Heinberg.

Peak Everything address the cultural, psychological and practical changes we will have to make as nature rapidly dictates our new limits. This book tells how we might make the transition from the Age of Excess, that we are currently in, to the Era of Modesty and efficient and sustainable consumption. For more information visit www.richardheinberg.com/books

Upcoming Events

The South African Association for the Study of Peak Oil (ASPO – SA) will be holding their Annual General Meeting at the MTN ScienCentre, Canal Walk on Friday, 31 October 2008 from 17:30.

The meeting will include presentations by Jeremy Wakeford on the ***Oil Price Roller Coaster*** and by Jeremy Leggett on ***Getting off the Roller Coaster with Renewables***.

For more information on the event, please visit www.aspo.org.za

Sustainable Energy Africa (SEA)

Sustainable Energy Africa promotes sustainable energy approaches and practices through research, capacity building, information dissemination, project implementation, lobbying and networking. SEA manages the Urban TRAN:SIT Programme, which aims to build capacity in local government to develop more sustainable transport policy, strategy and implementation in South African cities.

