

THE DEMISE OF THE HORSE DRAWN CARRIAGE INDUSTRY

Transport based on horse power has existed for centuries, but it was only the late 1800's that horse drawn carriages became available to the general public in Europe and the US. From the late 1890s to the 1920s, carriages and automobiles overlapped on city streets. Early cars were expensive and unreliable, regarded more as amusing novelties than as a serious means of transportation. But by 1910 innovations in mass production and engine technology had created a vehicle that was both more reliable and more affordable; it soon became clear that the car was here to stay.

It took only about 30 years for a very large industry based on horse transport to disappear. What did the owners of these businesses think about the threat posed by automobiles? How did they react? Did the owners actively disseminate negative information on automobiles to stem the tide?



Are the power companies, petrol powered car manufacturers and fossil fuel companies the horse carriage manufacturers of today? Are these industries facing

imminent demise? How long could that take and who will be hit first?

Darwin was reputed to have said, "It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change." Do these industries need to start adapting? Do they think they need to adapt?

STATE OF THE CLIMATE

To those of you that have bothered to keep an eye on the weather vane - the outlook is not good. Records continue to be broken. The year 2014 ranks as Earth's warmest since 1880, according to two separate analyses by NASA and National Oceanic and Atmospheric Administration (NOAA) scientists. The 10 warmest years in the instrumental record, with the exception of 1998, have now occurred since 2000. There is a similar outlook for 2015. Importantly, the sea appears to be absorbing far more energy than has been predicted.

<http://climate.nasa.gov/news/2221/>

MR ABBOTT – NO ROOM TO HIDE

Mr Abbott and the Coalition Government have been relatively comfortable in Australia following the rescinding of the Clean Energy Future legislation. The Government has suffered little scrutiny on the wisdom of the change.

However, it is different from a global perspective. As was painfully pointed out to Mr Abbott during the G20 summit in Brisbane last year, the US and China are planning to act aggressively on climate change. This year there will be considerable work done by countries to prepare for the Paris conference this November. At every meeting, scrutiny will increase on Australia's inadequate ambition. This has already started; with Australia being asked pointed questions by other countries on how we plan to contribute our share. At the same



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A business essential.

time, the Government has already started to ask for special exemptions that are based on spurious information.

Mr Abbott will increasingly be under the scrutiny of other global leaders and as November looms, there will be no room to hide.



TENSION BETWEEN COUNTRIES

In much the same way as Australia will begin to experience increasing pressure to explain its inadequate plans, countries will be asking each other why they are failing to take action. Global warming and the emissions and spread of greenhouse gases are truly a global problem and the laggards will experience probing from other countries that are acting. Sweden recently asked Canada how it was going to meet its obligations in light of its massive Tar Sands project.

Similarly, Third world countries will become increasingly vocal – especially those in low lying areas subject to sea level rise.

MARKET FORCES

As they said in the movie on Watergate "All the President's Men" – follow the money. Real change will only occur when the effects of climate change directly impact those that control the money. The flow of money and the resulting market forces have been evident in a number of areas.

Although Australia's in country emissions are a small percentage of the global emissions, Australia is a major contributor and beneficiary of fossil fuel exports - especially coal. If one were to account for the volume of carbon exported via coal and gas, Australia would be considered one of the world's major contributors to the carbon in the atmosphere.

Australia's dependence on this industry presents a real medium and long-term risk to the Australian economy. We are already experiencing the results of a dramatic fall in the price of iron ore and coal.

There is little discussion about our alternative strategies to fossil fuel exports. Billions of dollars are being invested in infrastructure on the premise that exports will yield a financial

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return for the next 20 or 30 years. One of the world's largest new open cut coal mines (Galilee Basin) is being developed in Queensland by the Indian company Adani. With a depressed price of coal and uncertain demand projections, Adani is finding it difficult to find financial backers.

The inability to gain financial backing was one of the main reasons why the Tasmanian Gunns paper mill failed. Given the clear statements from the Chinese regarding their plans to reduce the coal imports (because of air pollution), it is very unlikely that the Galilee basin project will proceed.

On a much larger scale, the issue of "unburnable carbon" is gaining attention in boardrooms and governments.

UNBURNABLE CARBON

The Governor of the Bank of England, Mark Carney, has warned that fossil fuel companies cannot burn all of their reserves if the world is to avoid catastrophic climate change and he called for investors to consider the long-term impacts of their decisions. Carney told a World Bank meeting that the "vast majority of reserves are unburnable if global temperature rises are to be limited to 2°C or less."



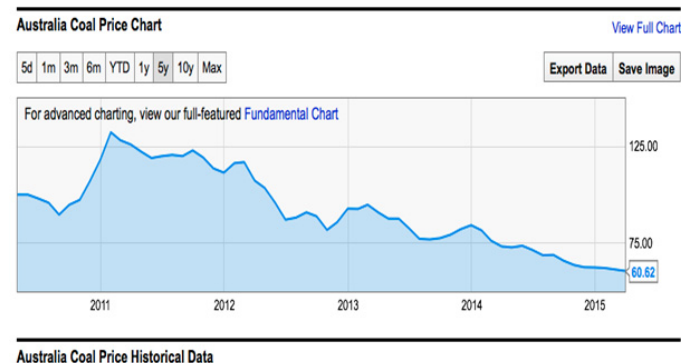
A large part of the share price value of fossil fuel companies is determined by the published recoverable reserves of these companies. Superannuation fund managers are being advised to consider the long term earnings risk

presented by the potential re-valuation of fossil fuel company share prices.

The most difficult aspect to understand about this issue is that fossil fuel companies are spending billions of today's dollars on exploration. Should this money better be spent on shareholders' dividends or finding alternative sources of energy?

POLLUTION IN CHINA

There are many parents in Chinese cities gravely concerned about the level of pollution from coal-fired power plants. These parents cannot take their children outdoors for fear of them becoming sick from the particulate matter in the air. China's single child policy has resulted in parents being particularly pre-occupied with the health of their only child. The Chinese



Government has been sensitive to these concerns and acted aggressively to reduce the burning of coal. During the first quarter of 2014, imports dropped 42% compared to the previous year and the price of Australia's export has dropped by more than half since 2011. Beijing will shutdown its last coal fired power plant in 2016.

As China is Australia's largest customer for coal, these developments present a real long term risk to the coal industry.

SOLAR POWER

Ten or even five years ago, few would have predicted the dramatic impact that domestic solar power generation would have in Australia. Householders have voted with their feet. And even when Governments have dramatically reduced feed-in prices, householders have continued to invest. In recent years, power demand has gone down and importantly for power companies, very profitable sales during peak power periods has dropped considerably.

The power price set by the Regulator provides a guaranteed return on investment to the power companies. This results in the power companies "gold plating" to maximise their dollar returns. This has been the main driver for the dramatic increase in power prices over the previous years.

A reduction in demand and over investment in infrastructure is causing a perfect storm for power companies in Australia. The impact of cost effective battery storage in the near future is likely to further worsen the outlook for power companies.

BATTERY TECHNOLOGY



The global success of Tesla points to a strong appetite for electric cars. By positioning the car in the premium segment of the market, Elon Musk has cleverly carved out a niche to demonstrate that this technology is viable. Then to really make life difficult for the traditional car industry, he "open sourced" the intellectual property for the car. Like the first time the 4 minute mile was broken, there will now be many others following his example.

As if this breakthrough was not enough, he has now embarked on the construction of a multi billion dollar battery factory in the US. This factory will be making cost effective batteries that will be available for a large range of users. The potential impact of this technology cannot be underestimated by the power industry.

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CALIFORNIA DROUGHT

In the same way that hurricane Sandy (2012) caused New York to take real action to protect itself from future flooding, the current drought in California is also focusing the minds of US leaders. The state is forecasted to have only one year's supply of water, after four years of drought. There seems to be very little appetite for aggressive water restrictions in the way most Australian cities experienced during the last drought. In the US there is also a very large group who actively deny the possibility that climate change is causing this drought. Considering we here in Australia suffered a 13 year drought only recently, makes one wonder how this will end for California's 30 million inhabitants?

LARGE COMPANIES ACTING IN THE ABSENCE OF GOVERNMENT REGULATION

This coalition, comprising 43 CEO's from companies with operations in over 150 countries and territories, and facilitated by the World Economic Forum, believes the private sector has a responsibility to actively engage in global efforts to reduce greenhouse gas (GHG) emissions and to help lead the global transition to a low-carbon, climate-resilient economy. This coalition further seeks to catalyse and aggregate action and initiatives from companies from all industry sectors—towards delivering concrete climate solutions and innovations in their practices, operations and policies.

<http://bit.ly/1CSsKeR>

2015 CLIMATE ALLIANCE NATIONAL CONFERENCE

We will soon begin the promotion for the 2015 National Conference. It will take place in Melbourne in October and we think that you will be very impressed with our line up!

LEADERSHIP AWARDS

We are pleased to announce the 2015 Climate Alliance Business Leadership Awards. The awards recognise Australian business leaders and organisations that have demonstrated leadership by addressing the opportunities or risks presented by climate change. The Climate Alliance awards celebrate the achievements of Australia's Boards, Directors, Executives, Secretaries and companies.

The awards will be presented at the Climate Alliance National Conference that will be held in Melbourne in October, 2015. Four categories of business leadership awards are available: *Board Leadership of the Year*, *Business Leader of the Year*, *Innovator/Exporter of the Year* and *Company Secretary of the Year*.

Deadline for submission is 28 August, 2015. See our website for details and the nomination form.

Climate Alliance Membership

Business leaders are cordially invited to join Climate Alliance and benefit from networking opportunities, invitations to events and access to information that deals with the opportunities and risks of climate change. See website for details and registration forms.

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About Climate Alliance

Climate Alliance is a not-for-profit, membership based company that collects and disseminates information on climate change. Our primary focus is to provide independent, business-oriented information to Company Directors, to help them inform themselves about the opportunities and risks resulting from climate change. We do not consult, lobby or develop policy.