

Australian Answers to Global Issues

Is Empathy the counter balance for Greed?

DRAFT

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1 Introduction

What began as my own attempt to make sense of the rising level of global chaos has turned into something much bigger. Trying to understand the mess of global issues with diverse symptoms has been bothering me for a few years now, but a lot of reading and testing of evidence has led me to notice some clear, repeating patterns. How is it that global climate scientists are almost unanimous in their understanding of Anthropogenic Global Warming and the urgent need for action, but active resistance is being funded by the owners of global commercial media networks, large corporations and their paid-for-comment pet 'journalists' around the world? What is the connection between Arab Spring protests, Austerity Protests, Brazilian anti-Olympic protests, Anti-refugee sentiment in Australia, moving Australian jobs overseas, massive bank profits and mining subsidies that go straight to profit margins? The fact is, they are all linked quite clearly to a philosophy that overtook western governments in the early 80s, after being forced on unwilling citizens in many South American countries in the 70s; neoliberalism.

This is not the cause of every problem in the world; humans are too clever at creating their own amazing messes. It is, however, at the centre of our global lack of concerted action to handle the real issues of climate change, dwindling fossil fuels and a global economic structure designed to destroy the environment at any cost.

This document has also become a body of research on the current state of the development of solutions that will:

- Move us away from fossil fuels and towards 100% renewable energy
- Create a new generation of active, collaborative and entrepreneurial citizens
- Force governments to become representative of the will of the people instead of the desires of the rich few.
- Create a new model of business that:
 - Supports small and medium businesses, who have always been responsible for the majority of job creation and innovation, at the cost of very large corporations.
 - Changes the underlying approach to economics and business management to mandatorily include Social Debt and Environmental Debt in every model and on every balance sheet.

The prospect of trying to propose global solutions for these global problems is filled with far too many variables caused by different countries, cultures, legal systems, environmental constraints and general community awareness. So rather than boil the ocean with a kettle, this document focuses on the situation in Australia. We will explore the solutions for Australia within the global context; with the intent that Australia becomes a global thought leader on these issues. The amount of intellectual property developed in the course of administering what will be a paradigm shifting change will become the basis of a service that the country will be able to collectively offer the world. With the move to a service based economy in Australia a necessary aspect of the modern world; this will kickstart a whole new industry in developing, deploying, maintaining and improving progressive services that enable a powerful future in the new millennium and the Asian century.

This is intended to show the goals and the direction to take now to start moving towards them in measureable ways. You may be as pleasantly surprised as I have been in uncovering an immense amount of progressive individuals and organizations who are already working towards a better future – and have been for some time. Instead of complaining about the current state, here is the working form of a map to a new era in human social evolution.

The precise nature of each step along that pathway is not the aim of this document; that is part of the next milestone... This is painting a picture of a better world in a better future than the one we are plunging towards carelessly today.

The Links

These views have not been formed in the absence of evidence. This is not the result of a divine epiphany and eternal wisdom. This is the result of a few years' worth of reading and considering alternative viewpoints before settling more and more into one supported by the majority of evidence from history up to the modern age. As a result, this document is really designed to be read online. The ability to click and follow links as required opens up a journey to be followed across thousands of connected websites and sources of further and deeper information. I've been saving links for years and have whittled them down to find the best examples.

I have then made every attempt to make links to a large array of websites to gather together the same diversity of information for you to consider. I set myself some rules in choosing these links to provide a guide based on the most credible evidence available.

What's Out:

- Any link from an organization that is extreme left wing in outlook.
- Any link from an organization that is extreme right wing in outlook
- Any link from an organization or individual that posts ideology without evidence

What's In:

- Primary source of evidence preferred
- Secondary source with link to the primary.
 - This is often where someone else has gathered together a number of links on the topic and related topics to make it easier for you to also branch out and study further.
 - This may also be to a book or other reference material that itself contains a large number of detailed references in forming large, complex views.
- News sources that reference their original sources.
- A secondary source that has created a useful view or way to understand the information
- On occasions a video has been linked that explains a complex topic in an understandable manner.

2 Define the Current State of the Problems

2.1 Anthropogenic Climate Change



The evidence for Anthropogenic Climate Change is overwhelming. Over the past forty years the hypothesis has moved from 'Is our world warming up outside historical, natural behaviour of the global ecosystem?' to 'What exactly are the effects of the expected two or three degree average rise in global temperatures on global climate?'. In the intervening time a vast amount of studies have been undertaken around the world by a large variety of scientists and the agreement in 2013 has been summed up in the latest Inter-Government Panel on Climate Change (IPCC) report.¹

To summarise the findings succinctly,

1. Global temperatures are rising steadily - as predicted
2. Human activity releasing carbon into the atmosphere is the primary cause
3. The global climate has already changed to bring more extreme weather events more often - as predicted.
4. Action must be taken now on a global basis to prevent the catastrophe from getting worse.

For a well detailed site that explains the science on this topic in a way that anybody can understand, go here: <http://www.skepticalscience.com/>

The Australian site manager has spent a phenomenal amount of time assembling the definitive repository of evidence based reasoning on climate change. It includes answers to the many myths spread in commercial media as well as the ability to choose from a simple, intermediate or full academic view of the evidence and debate. This includes reference links back to actual studies so you can validate them separately as required. The information is here to convince yourself based on evidence from primary and secondary sources. This site deserves an award for standing for the scientific process against a flood of misrepresentations, half-truths and outright lies.

¹ <http://www.ipcc.ch/report/ar5/wg1/>

The results are no real surprise to anybody who has been following the path of research. The predictions made by models in 1990, which were far simpler than those in use today, were proven accurate twenty years later. This is the kind of hypothesis based prediction that forms the basis of good science.

The predictions being made in 2013 for the next fifty years are profoundly disturbing. The scope of this problem is global; if we do nothing then we will see catastrophic effects globally within 30-50 years.² This will include more extreme storms, longer monsoon seasons, higher maximum temperatures and substantial rainfall variation³. These will severely impact food production globally and make the distribution of food and drinking water a global concern. This reality must force us to consider what activities we can undertake on national and international levels to reduce the growing amount of carbon in the atmosphere.

In order to stabilize CO₂ concentrations at about 450 ppm by 2050, global emissions would have to decline by about 60% by 2050. Industrialized countries greenhouse gas emissions would have to decline by about 80% by 2050.⁴ This places significant burdens on the highly industrialised countries like China and the USA to change their business models and technical solutions across every industry they operate in. It puts equal pressure on fossil fuel resource countries like Australia to reduce mining and export activities as soon as possible. This is also the fundamental cause of the resistance; no corporation wants to change a system that is working to bring them huge profit margins. If that greed could be redirected towards starting up new industries to support new solutions, we could make progress. If that greed were redirected to innovation, we would provide a better future for every living creature on the planet.

² <http://news.nationalgeographic.com.au/news/2013/10/131009-climate-change-worldwide-cities-science/>

³ <http://www.livescience.com/37057-global-warming-effects.html>

⁴ <http://www.climatechange2013.org/report/>

2.2 The Energy Trap



This explores the problem of finding the energy to change your source of energy. It takes a lot of energy to build new power plants of a kind we haven't completely designed before. That energy cost is on top of the overall increasing demand for energy from industry and individuals alike. If we leave the start of the change for too long, with fossil fuel reserves permanently dwindling, we face the possibility it will be too expensive to change at all.⁵

Let me say that again, if we don't act in time, it will become too expensive to act at all. We will be trapped in the past.

If that point is reached, you will find whole countries desperately mortgaging their nation's future to corporate greed in order to fund the change they need.

The site in footnote 5 gives an approach to determine what the lead time is to make the required change, so that can be placed against the time frame of increasing fossil fuel prices. The last twenty years of the current oil reserves will see the price rise significantly and those reserves are currently understood to run out globally in 53 years at current consumption levels.⁶ That means in 2066 there will be no oil left in any current reserve anywhere in the world and the oil industry will have spent the decades leading up to this point finding more and more expensive sources to keep the money flowing. This means we must complete the migration off oil by 2046 to avoid the worst crushing damages and debt. To complete that migration off oil, we need to start a dedicated building program at least 20 years before 2046, in 2026. To start that dedicated building program, we would need ten years of dedicated planning to understand precisely what to build and when. So our last post deadline for completely dedicated national action is 2016 to be free from ANY reliance on oil. I've filled in the same information for natural gas and coal based on the BP 2013 statistical summary.

Resource	National planning be must started by:	National building replacement must start by:	100% Replacement in Australia Complete by:	End of Asia Pacific Resource supply ⁷	End of Global Resource Supply ⁸
Oil	2016	2026	2046	2027	2066

⁵ <http://physics.ucsd.edu/do-the-math/2011/10/the-energy-trap/>

⁶ http://www.bp.com/content/dam/bp/pdf/statistical-review/statistical_review_of_world_energy_2013.pdf

⁷ http://www.bp.com/content/dam/bp/pdf/statistical-review/statistical_review_of_world_energy_2013.pdf

⁸ http://www.bp.com/content/dam/bp/pdf/statistical-review/statistical_review_of_world_energy_2013.pdf

Natural Gas	2027	2037	2057	2045	2069
Coal	2063	2073	2093	2064	2122

Figure 1: Schedule to avoid the energy trap – optimistic version

It is important to give this data some context, this is a prediction made by the oil industry, so it is likely to be optimistic. The rate of resource consumption is based on maintaining current levels. Based on history to this date, that is a bad assumption⁹, so all these dates will shift earlier if we allow the expected 56% growth in consumption by 2040. As oil runs out, there will be increased demand placed on natural gas and coal reserves, which will increase their consumption. The final aspect is that this is based on a list of known and accessible reserves. There are more reserves in Antarctica and remote locations that today are uneconomical to exploit. As the price of fossil fuels rises steadily, this will start to look like an option. At that point, we will need to decide if propping up a dying industry is worth destroying pristine environments permanently.

I have added a second table below to show the likely consequences of both increased consumption and more rapid consumption of natural gas and oil. This takes into account only the increased consumption from 2040 and assumes there is no further increase after that year. In this way, it can take into account exploitation of currently inaccessible reserves as well as reduced demand from countries that do change. The end date for coal has an additional 10 years taken off to account for increased demand after the end of oil and gas around 2060.

Resource	National planning be must started by:	National building replacement must start by:	100% Replacement in Australia Complete by:	End of Asia Pacific Resource supply - adjusted	End of Global Resource Supply - adjusted
Oil	2012	2022	2042	2027	2057
Natural Gas	2020	2030	2050	2041	2059
Coal	2035	2045	2065	2048	2083

Figure 2: Schedule to avoid the energy trap – balanced version

So what exactly does ten years of planning followed by building include?

The answer is different for the different resources. Oil is crucial to a wide variety of industries¹⁰, which makes it particularly concerning that it will expire first. This means all of those industries must actively research other ways to meet their needs or innovate new ways to supply their energy needs. This will also have a massive impact on residential consumers reliant on petrol or diesel vehicles. We are now one year late to begin the national planning phase to answer the question of how to stop using petrol and diesel vehicles completely by 2042.

There will also be a heavy impact on LPG powered vehicles where the gas is produced from oil instead of separated from natural gas sources. In Australia, the vast majority of LPG is produced from natural gas sources. Industrial consumers will also be radically affected - fundamentally changing the mining, shipping, rail and road transport industries.

⁹ <http://www.eia.gov/forecasts/ieo/>

¹⁰ <http://www.eia.gov/tools/faqs/faq.cfm?id=41&t=6>

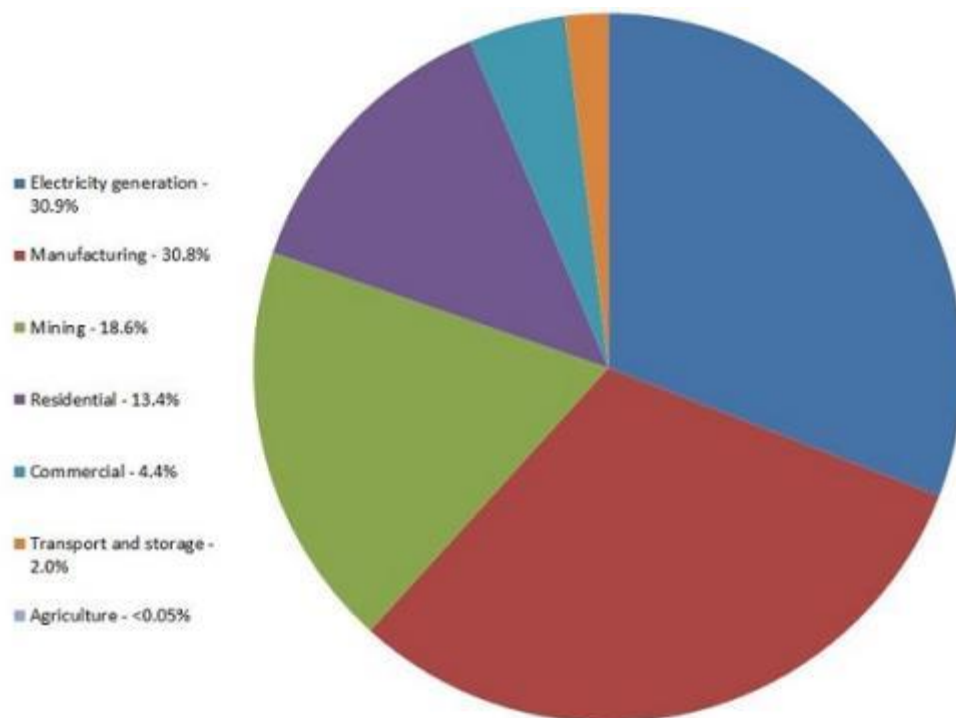


Figure 3: Natural Gas Consumption in Australia by Industry 2011-12¹¹

Natural gas will affect residential consumers who currently use it extensively for heating and cooking as well as in LPG powered vehicles. Industrial consumers also use gas extensively for heating¹². This demand will need to be moved to renewable electricity powered appliances and vehicles by 2050.

We will need solutions for ALL the different renewable electricity powered vehicles required to supply these needs in place by 2042.

Coal will affect residential consumers through its extensive use in electricity generation. Industrial consumers in the steel and cement industries will need to find new energy sources to heat kilns.¹³ This demand will need to be replaced completely by 2065.

¹¹ http://www.esaa.com.au/policy/data_and_statistics- energy in australia

¹² <http://www.essentialenergy.com.au/content/education-natural-gas>

¹³ <http://www.australiancoal.com.au/energy-a-construction.html>

2.3 Global Food Production and Distribution



The International Assessment of Agricultural Science and Technology for Development (IAASTD), an intergovernmental panel under the sponsorship of the United Nations and the World Bank, adopted the following definitions:

“Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. (FAO, The State of Food Insecurity, 2001)

Food sovereignty is defined as the right of peoples and sovereign states to democratically determine their own agricultural and food policies.”¹⁴

These definitions were necessary to establish to describe principles for operation in the future as opposed to the drive to monopolize food production and distribution by a small number of immense multinational companies.¹⁵ The effects of climate change increasing at the same time will amplify this problem; these corporations do not want to see their current operating model change (which would destroy their profit margins) and they also want to place themselves with monopolies over what will become scarce resources. This starts to show why the resistance to change is strong, global and very well-funded.

Multinationals pushing neoliberal agendas globally have resulted in the economies of countries being made more subservient to export demands than producing food for their own population.¹⁶ This can be related to foods that draw high profits in western countries, such as tobacco, coffee and tea, or to non-food production such as biofuels. The economic imperative to make profit above all concerns has resulted in local populations suffering as their wealth and produce is drained from the country without a significant return. These activities led to what was called the global food crisis of

¹⁴ [http://www.unep.org/dewa/agassessment/reports/IAASTD/EN/Agriculture%20at%20a%20Crossroads_Synthesis%20Report%20\(English\).pdf](http://www.unep.org/dewa/agassessment/reports/IAASTD/EN/Agriculture%20at%20a%20Crossroads_Synthesis%20Report%20(English).pdf)

¹⁵ <http://www.globalpolicy.org/component/content/article/221-transnational-corporations/52528-reports-show-corporate-control-entrenched-in-global-food-chain-.html>

¹⁶ <http://www.globalissues.org/article/7/causes-of-hunger-are-related-to-poverty#Diversionoflandusetonon-productiveuse>

2008¹⁷, which prompted a number of global organizations to publicly recognize the ongoing impacts of rising food prices globally.¹⁸ Despite warnings then and subsequently, little action has been taken by governments globally and the trigger point for a catastrophic crisis becomes closer and closer.¹⁹ The prices rises are not being caused by simple supply and demand economics; there are complex layers of securities trading, environmental impacts of extreme weather and political impacts of neoliberal governments.²⁰

There is likely to be a particular resource conflict in the future between the desire to produce biofuels over production of edible food.²¹ This will be part of the conflict between using biofuels or energy sources that do not release carbon into the atmosphere. These conflicts will manifest as issues of both food security and sovereignty as multinationals push for biofuel profits while citizens want to eat. There are newer approaches to producing biofuels that do not compete directly with food production and these need to be developed and explored in more detail.²²

The question of Genetically Modified Organisms (GMO) is a part of this issue as the production of artificial, patentable, organisms provides these companies with a legal means to enforce their monopoly.²³ The real issue is not with the GMOs themselves, it is that they are being used to enforce a terrible monopoly and being released far too quickly into the wild. This rapid release of new organisms into the environment is the greatest danger to our food supply. The lesson of the cane toad in Australia serves as a permanent reminder for people claiming the causes of 'science' and 'progress' are best served by GMOs.²⁴ Natural mutation will occur to change the nature of these plants and there is no guarantee this will be beneficial for humans or even for the plants themselves. In fact, the agriculture industry used to irradiate seeds to force mutations and discovered the overwhelming majority were detrimental. Wisdom tells us that GMO crops should be kept separate from current seed and food stocks until enough time and studies have been made to determine some level of predictability in results. This means decades per new discovery to responsibly introduce them to natural world.

Monsanto is the best known and largest of the companies imposing profit over people principles and has a long history of deceit, greed and manipulation of governments.²⁵ This particular organization forms a nexus point in describing precisely what is wrong with corporate laws, regulatory capture and the worship of profit and 'growth' as being the primary goals of humanity.²⁶ They actively seek to annihilate food sovereignty such that they can control global food security and guarantee their

¹⁷ <http://www.globalissues.org/article/758/global-food-crisis-2008>

¹⁸ <http://www.un.org/esa/socdev/rwss/docs/2011/chapter4.pdf>

¹⁹ <http://www.theguardian.com/global-development/2012/oct/14/un-global-food-crisis-warning>

²⁰ <http://beforeitsnews.com/gold-and-precious-metals/2013/07/the-coming-global-food-crisis-2511942.html>

²¹ <http://www.csiro.au/Outcomes/Food-and-Agriculture/biofuels-and-competition.aspx>

²² <http://reneweconomy.com.au/2013/new-and-improved-biofuel-cost-competitive-by-2016-2106>

²³ http://www.theecologist.org/News/news_analysis/2140802/the_real_point_of_gm_food_is_corporate_control_of_farming.html

²⁴ <http://www.environment.gov.au/resource/cane-toad-bufo-marinus>

²⁵ <http://www.sourcewatch.org/index.php/Monsanto>

²⁶ <http://www.globalresearch.ca/the-growing-global-challenge-to-monsantos-monopolistic-greed/5336076>

Food Security Risk Index 2013

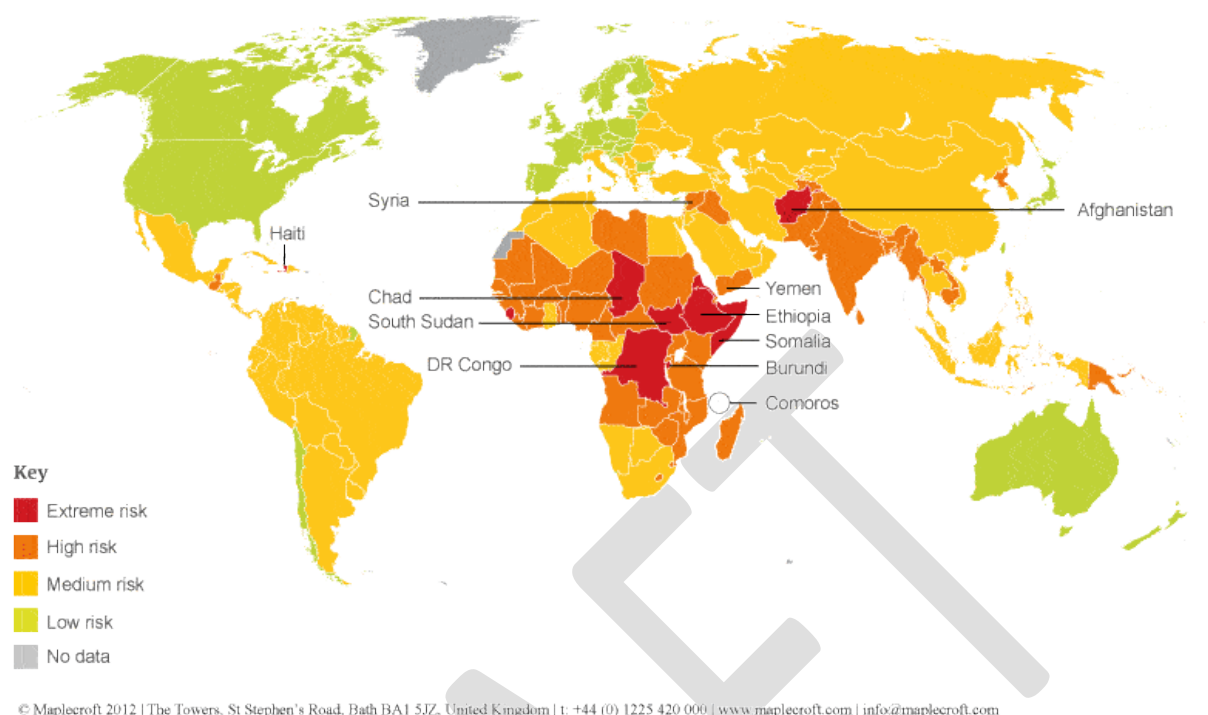


Figure 4: Food Security Risk Index

The truth today is that enough crops are produced in 2013 to feed the ten billion people expected in 2050, but it is not distributed effectively.²⁷ It is simply wasted.²⁸ The answers do not lie within GMO crops either, the evidence shows that modern organic food production is equivalent in good years and far better in years of drought or other environmental stress.²⁹ In summary, the problems within the global food production and distribution systems are:

1. The global waste of 30-50% of all food produced due to issues with distribution and poverty
 - a. The perpetration of the lie of GMOs increasing food production when evidence shows not only that they don't, but that it is not necessary.
2. Anti-competitive practices by an increasingly small group of global multinationals leading the actions of neoliberal governments.
 - a. Edging out or buying out competitors
 - b. Bringing many new laws to protect profits instead of people.
 - c. The active prevention of any change in the industry globally by these organizations to maintain their control and profit margins.
 - d. Global regulatory capture and government lobbying creates further concentration of control and wealth
3. The use of GMOs to provide a legal basis in intellectual property law for global control of the entire market – from farm to fork.

²⁷ <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/01/12/how-the-world-manages-to-waste-half-its-food/>

²⁸ <http://www.cnn.com/id/100893540>

²⁹ http://www.huffingtonpost.com/eric-holt-gimenez/world-hunger_b_1463429.html

- a. Using government influence to establish patent law for GMOs
- 4. The rapid spread of GMOs into the natural environment with minimal testing
 - a. Monsanto in particular have a long history of concealing and falsifying their own studies that show the dangerous truth.

2.4 Global Water Supplies

"All are places where shortages of water contribute to poverty. They cause social hardship and impede development. They create tensions in conflict-prone regions. Too often, where we need water we find guns. [...] There is still enough water for all of us - but only so long as we keep it clean, use it more wisely, and share it fairly" Ban Ki-moon, UN Secretary General

There has been a global water crisis growing for decades, the UN declared 2005-2015 to be the international decade for action "Water for Life" to raise awareness and global action on this issue.³⁰ There are multiple causes for this shortage, relating to sanitary storage and distribution, economic access to clean water and a simple lack of available water in drier regions. This is a matter that requires global attention, as combined with food supply and distribution; this is literally the lifeblood of the human race. The World Economic Forum has listed water crisis as the third highest global risk of 2014 – following only global financial system crashes and unemployment.³¹ The situation is not being made easier by multinational companies actively working to seize natural water supplies and sell them to locals at a margin.³² This activity should be outright illegal, with water supply being a permanent function of the government.

Water is a human right.

³⁰ <http://www.un.org/waterforlifedecade/scarcity.shtml>

³¹ http://www3.weforum.org/docs/WEF_GlobalRisks_Report_2014.pdf

³² <http://www.globalresearch.ca/the-privatisation-of-water-nestle-denies-that-water-is-a-fundamental-human-right/5332238>

2.5 Why is it taking so long to get started on implementing solutions?



"Yes, the planet got destroyed. But for a beautiful moment in time we created a lot of value for shareholders."

2.5.1 The Culture of Greed

So there's some group of people controlling all this isn't there? The Bilderberg group, a Rex Mundi, the Rosicrucians, the Illuminati or the giant reptile overlords some fringe dwellers favour.

No.

There isn't and there doesn't need to be, the only conspiracy is one of greedy people competing with each other to be greedier and seize 'more'. They see themselves as the peak of human evolution, those who have managed to seize more wealth and hoard it than anybody else. They have perpetrated a media campaign to justify greed as being a virtue and raise selfishness to the highest status; the Culture of Greed.

This is the philosophy of someone with an antisocial disorder we call psychopathy.

This is the outlook of a profoundly damaged person who thinks that humans operate entirely by and for themselves. They don't. The only evidence to support this point of view comes from someone who casually ignores the society in which they live; psychopaths.

Greed combined with fear is a primal driver that is now being used to attempt to convert the worldview of the majority of citizens in many countries worldwide. Fortunately, it has stopped working as these people realize they exist in a society of extreme inequality, where their labour is deemed to be worth a tiny fraction of a percent of someone else's. This dissent and eventual violent revolution is always the result of societies that succumb to the conspiracy of greed. There are no exceptions in history. Emperors fail, Kings fall, the nobles are executed and the whole process begins again.

This is not an attempt to tell everybody to stop being greedy forever. Such a claim would be ridiculous and also serves to ignore the lessons of history. Greed can be a useful source of energy

and inspiration for many people, but not when it is uncontrolled; then it is only self-destructive. It needs to be tempered and balanced with empathy. It needs to evolve to the greater concept of Ubuntu, "I am because we are".³³ There is no problem with an individual operating for self-interest when that action ends up benefitting society at large. This recognizes the debt that all people, businesses and corporations owe to the societies in which they operate and requires a repayment of that debt in kind.

2.5.2 Corporate Control of Mass Media

A central force working for the corporate takeover of government is the global centralization of ownership and control of mass media outlets in western democracies. Whilst this is just an element of the conspiracy of greed, of greedy people using mass media to spread their version of the truth for personal gain, it has turned into a far worse vehicle for neoliberal attacks on society. What started with media barons vying for monopolies that were kept in check by cross-media ownership and anti-trust laws has turned into the mouthpiece to spread neoliberal philosophy to the masses. This has been a result of deals being made with governments to provide mass media support during elections in return for looser regulation of their business – allowing massive concentration of media ownership across the western democracies.

The active resistance to climate change is being funded entirely by the owners of global commercial media networks, large corporations and their paid-for-comment pet 'journalists' around the world. If you don't believe it, find out who is paying them for their comment. Follow the money and you will find the answer.³⁴ The Australian Climate Science Coalition who claim to be an independent group relying on public support are entirely funded (except for \$138) by the Heartland Institute in the US. This was the institute that launched a public campaign during the 90s supporting tobacco company Philip Morris in claiming that nicotine wasn't really addictive and smoking wasn't really bad for you.³⁵ The aim of these organizations is to provide talking heads to have a media presence to spread fear, uncertainty and doubt on the topic of climate change.

What these sites completely fail to do is actually produce genuine scientific studies that counter the evidence of the over 12,000 studies performed by thousands of climate scientists from around the world.³⁶ We are being asked to believe that scientists from countries around the world, working for many different organizations, both public and privately funded, are engaged in a massive conspiracy to trick us all into making the world a cleaner and more viable place in which to live. The alternative is that a small number of very rich individuals are doing everything in their power to keep things just the way they are in order for their profits to keep rolling in. Massive, global conspiracy involving thousands of disconnected people or a small group of greedy people being greedy?

"when you have two competing theories that make exactly the same predictions, the simpler one is the better." (Occam's Razor – also spelled Ockham)³⁷

Occam's razor tells us clearly we are being lied to by a small group of the very rich.

The strategies of these media engagements have been led by many smart people using every modern technique of marketing, advertising and information manipulation at their hands. You wouldn't think you could write a better novel of deceit, manipulation and brutal force – except somebody did. George Orwell, in his book '1984', showed a future of an absolute totalitarian

³³ <http://www.peuplesawa.com/fr/bnnews.php?nid=1987>

³⁴ <http://www.scientificamerican.com/article/dark-money-funds-climate-change-denial-effort/>

³⁵ http://www.sourcewatch.org/index.php?title=Heartland_Institute

³⁶ <http://www.skepticalscience.com/tcp.php?t=home>

³⁷ <http://math.ucr.edu/home/baez/physics/General/occam.html>

government controlling a large part of the world³⁸. The government achieves this by controlling the flow of information and wealth to all its citizens in order to create a society of mindless drones who are both detached from each other and from reality in general. They are encouraged to watch sports, take drugs and engage in casual sex - but breeding is strictly controlled.

*"practices which had long been abandoned, in some cases for hundreds of years – imprisonment without trial, the use of war prisoners as slaves, public executions, torture to extract confessions, the use of hostages, and the deportation of whole populations – not only become common again, but were tolerated by people who considered themselves enlightened and progressive"*³⁹

Reading that section from the book is shocking wakeup call to recognize Guantanamo Bay⁴⁰ and the US military practices of torture and disappearances practiced globally and known as 'renditions'.⁴¹ Turning prisoners into slave workers has been a practice in the US for a decade now, whilst still relatively small in volume, it does still represent an extensive pilot program for a bleak future.⁴² A situation only made possible by the relentless media onslaught to distract and misinform the population at large.

There are many other ideas in the novel that are disturbingly familiar in mass media today;

Newspeak: A redefinition of language to simplify everything to remove concepts of philosophy that could lead to challenging authority. To make authority seem inevitable and all-powerful. This approach to mass media has led today to a generation of people who believe that voting is pointless, that our government is in complete control and we should just be happy with whatever we can get day to day⁴³. The corporate media conglomerates have worked actively against the interests of the people in concealing the outright illegal and unethical activities of both corporations and governments by the creation and use of a neoliberal Newspeak⁴⁴.

Doublethink: Encouraging people to accept two mutually exclusive ideas in everyday life without questioning it or even seeing the conflict⁴⁵. This is cognitive dissonance without the conflict between the ideas causing further issues. The people affected simply do not see the ideas as connected or that connecting them is relevant or sensible.

"The power of holding two contradictory beliefs in one's mind simultaneously, and accepting both of them... To tell deliberate lies while genuinely believing in them, to forget any fact that has become inconvenient, and then, when it becomes necessary again, to draw it back from oblivion for just as long as it is needed, to deny the existence of objective reality and all the while to take account of the reality which one denies – all this is indispensably necessary. Even in using the word doublethink it is necessary to exercise doublethink. For by using the word one admits that one is tampering with reality; by a fresh act of doublethink one erases this knowledge; and so on indefinitely, with the lie always one leap ahead of the truth" (Orwell, George (1949). Nineteen Eighty-Four. Martin Secker & Warburg Ltd, London, part 1, chapter 3, pp 32)

³⁸ <http://www.dailymail.co.uk/debate/article-1192484/60-years-Orwell-wrote-1984-destroyed-book-chilling-reminder-sinister-vision-reality.html>

³⁹ <http://www.theguardian.com/books/2013/jan/24/george-orwell-britain-in-2013>

⁴⁰ <http://www.huffingtonpost.com/news/guantanamo-bay-torture>

⁴¹ <http://www.amnesty.org/en/library/info/AMR51/051/2006>

⁴² <http://www.globalresearch.ca/the-prison-industry-in-the-united-states-big-business-or-a-new-form-of-slavery/8289>

⁴³ <http://www.spinwatch.org/index.php/issues/more/item/4185-newspeak-in-the-21st-century-by-david-edwards-and-david-cromwell-media-lens>

⁴⁴ <http://ijoc.org/index.php/ijoc/article/viewFile/798/491>

⁴⁵ <http://www.dailypaul.com/274071/making-a-list-of-modern-doublespeak-and-doublethink-examples-chip-in>

This is precisely how Conservative political groups who favour neoliberal approaches treat the people of their countries. What is disturbing is how effective this has been in bringing large groups of middle and lower class workers to believe that conservative governments are operating in their best interests.

Thoughtcrime: The idea that even thinking of something in a way that is not aligned with the government and corporate program is a criminal act. The act of defining a problem as being caused by or even associated with the controlling power is deemed to be the beginning of a pathway to action against those powers and therefore is the source of guilt. This has never been a criminal offense under any western democracy, but Texas in the US has recently moved to allow prosecution based on 'prediction of future behaviour' – Thoughtcrime.⁴⁶



What began as Orwell's satire of Stalin's USSR government grew into a focused study of the worst kind of manipulation of people by government. Orwell's imagination of extending the control of a totalitarian government into every moment of your waking life has become a terrible prediction of how conservative politics unfolded since the 1970s. The original driver of the greed of corporate media owners transformed into the tool of neoliberal movement; the public relations branch of the conspiracy of greed. The book 1984 was meant to be a vision of a dystopia to be avoided, not a blueprint for modern society.⁴⁷

⁴⁶ <http://rt.com/usa/texas-warrants-future-prediction-crimes-449/>

⁴⁷ <http://www.dailymail.co.uk/debate/article-1192484/60-years-Orwell-wrote-1984-destroyed-book-chilling-reminder-sinister-vision-reality.html>

2.5.3 Neoliberalism and the corporate control of government

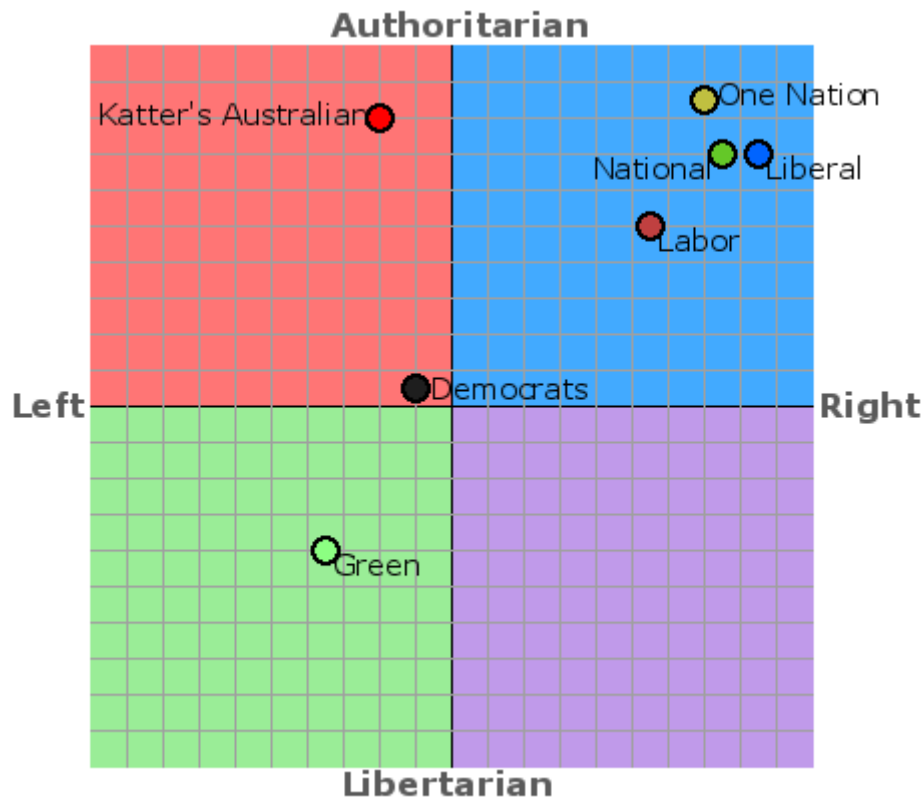


Figure 5: Australian Political Spectrum 2013

This diagram shows a different way to analyze a political spectrum that shows the economic perspective from a completely state controlled economy on the far left (communism) to a deregulated economy on the far right (neoliberalism). The vertical scale shows an authoritarian, dictatorship style government that strictly controls social roles at the top and anarchism at the bottom. Using this spectrum we discover the trend of the last forty years in modern western society, which is that authoritarian neoliberalism has become the standard viewpoint. So what is neoliberalism exactly? What does it see as the ideal system and how does it seek to achieve that perfection?

The ideal system that neoliberal philosophy works towards has these fundamental beliefs:⁴⁸

1. Continuous economic growth is the way to human progress.
2. Free markets without government interference would be the most efficient and socially optimal allocation of resources globally
 - a. A philosophy of globalism where economic transactions increasingly cross national boundaries without any control.
 - b. This also includes the deunionizing of labour forces and removal of any impediments to capital mobility, such as regulations on financial transactions.
 - c. Deregulation, to allow market forces to act as a self-regulating mechanism.
 - d. Economic globalization would be beneficial to everyone, where the market is self-regulating allowing the “trickle down” notion of wealth distribution.

⁴⁸ <http://www.globalissues.org/article/39/a-primer-on-neoliberalism>

3. Governments should mainly function to provide the infrastructure to advance the rule of law with respect to property rights and contracts and maintain a national defence force.
 - a. Defence spending overseas should only be to protect or enforce trade contracts.
 - b. Privatization removes inefficiencies of public sector (government)
 - c. People should look after themselves instead of relying on government, therefore dismantle all social welfare systems
4. Change perceptions of public and community good to individualism and individual responsibility. The change is for their own good.
 - a. Reducing public expenditure for social services, such as health and education, by the government – these should be provided by the individual on a user pays basis.
5. There Is No Alternative (TINA): This is the only way to run a good society that enjoys all the benefits of infinite growth and profits.
 - a. Hard work is always rewarded by profits and vast wealth; only lazy people are poor.

This is clearly an extreme philosophy and one with deep flaws when applied to reality. Fundamentally it denies the fact that humans are social creatures that rely on one another to succeed and excel. Only psychopaths can believe this kind of bare faced lie and it is to this personality that neoliberalism appeals to. The film and essay “The Corporation” explores the idea at some length, establishing that if corporations are people, as current global law states, then they are psychopaths.⁴⁹

So what does that mean and can we test that idea against the above beliefs of neoliberalism?

According to the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM V), a psychopath is a particular example of Antisocial Personality Disorder.

“Typical features of antisocial personality disorder are a failure to conform to lawful and ethical behavior, and an egocentric, callous lack of concern for others, accompanied by deceitfulness, irresponsibility, manipulateness, and/or risk taking. Characteristic difficulties are apparent in identity, self-direction, empathy, and/or intimacy, as described below, along with specific maladaptive traits in the domains of Antagonism and Disinhibition.....A distinct variant often termed psychopathy (or “primary” psychopathy) is marked by a lack of anxiety or fear and by a bold interpersonal style that may mask maladaptive behaviors (e.g., fraudulence)”⁵⁰

So given the single goal of a corporation to acquire profit, neoliberal philosophy directly represents the desires of a psychopath to achieve that end unhindered by any concern with people or society. The removal of government ‘interference’ with that goal, the purely selfish individual focus and the utter disdain for the society that is destroyed make neoliberalism the playground of disturbingly antisocial psychopathic behavior.

The best complete description of neoliberalism in action is found in Naomi Klein’s “The Shock Doctrine”⁵¹. This lays out the actions of governments around the world that have become a slave to this trend and how it has acted directly to destroy societies and concentrate global wealth in the hands of a very few corporations. Not only have we concentrated control of the majority of the

⁴⁹ http://www.thecorporation.com/index.cfm?page_id=312

⁵⁰ http://www.ebook3000.com/Diagnostic-and-Statistical-Manual-of-Mental-Disorders--5th-Edition--DSM-5_200927.html

⁵¹ <http://www.naomiklein.org/shock-doctrine>

world's wealth into less than 150 companies⁵², but the wealth of those companies is effectively controlled by just four companies that set investment index ratings.⁵³

These same psychopaths claim that this is the only choice we have to achieve 'prosperity' and 'progress', so what exactly is the problem with each of those core beliefs? Milton Friedman is hailed as the economic philosophical leader of the neoliberal movement. However, his views do differ substantially from the systems deployed by the proponents of the neoliberal philosophy. He believed in personal freedom over authoritarian government and was against welfare, including corporate welfare, of any kind.

"There is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud" Milton Friedman

Friedman, however, never accepts that the inevitable end of deregulated capitalism is a monopoly of corporate power, despite all the real world evidence from history unilaterally proving this to be a fact. In Friedman's utopia, small businesses perpetually form and reform to provide competition for established businesses because everybody is free to do so. In reality, established businesses will do everything in their power to undermine and remove competition until they get large enough to simply buy government favour. At some point they can simply buy the government as has occurred in multiple countries suffering under neoliberal philosophy. Large corporations feel less and less bound by the 'rules of the game' that Friedman naively thinks they will abide by as they discover it takes less resources to change the rules than it does to compete in a free market.⁵⁴

The game 'Monopoly' clearly shows how unregulated capitalism works in reality; it was intended to practically demonstrate exactly this problem. The only possible conclusion is that all the wealth is owned by very few people⁵⁵ – leaving everybody else frustrated and alienated by the system. The early stages of the game are Friedman's free trade ideal in action. This is the exciting part of the game where anything is possible and everyone is equal and free to move and choose. As the game progresses and the finite property is all purchased and owned, then rent starts becoming payable and the game changes. There is no way to unseat the rich once their rule is established. There is no government regulator to prevent abuse of power. The end state is typically arguments and anger at the loss of freedom that comes with allowing monopoly. Friedman's answer is to simply say that economic freedom is the perfect state and that this will magically solve the problems. The reality as shown in every economy that has adopted these ideas is that wealth first gets concentrated in the hands of the few and then exported overseas to the foreign investors who prey on the 'free' economy.⁵⁶

There is some good evidence that the simplified model of humans proposed by Nobel Prize winning economist John Nash and used frequently ever since is deeply flawed. In fact the only people who behave as the utterly self-interested 'well informed' person of economic theory are economists themselves – and psychopaths.⁵⁷ This shows a deep failure of economic theory made clear in the 2008 crash – new approaches are needed that actually begin in reality rather than utopia⁵⁸.

⁵² <http://www.forbes.com/sites/bruceupbin/2011/10/22/the-147-companies-that-control-everything/>

⁵³ <http://www.forbes.com/sites/brendancoffey/2011/10/26/the-four-companies-that-control-the-147-companies-that-own-everything/>

⁵⁴ <http://www.corporatecrimereporter.com/top100.html>

⁵⁵ http://www.salon.com/2013/02/09/how_monopoly_turns_us_into_uncreative_capitalist_vultures_partner/

⁵⁶ http://www.academia.edu/815901/The_Neoliberal_Tide_II_An_Unrelenting_Quest_for_Wealth_Accumulation

⁵⁷ <http://www.youtube.com/watch?v=XGJbLk9yPug>

⁵⁸ http://www.wright.edu/~tdung/Goodbye_home_economicus.htm

2.5.4 Neoliberal philosophy debunked



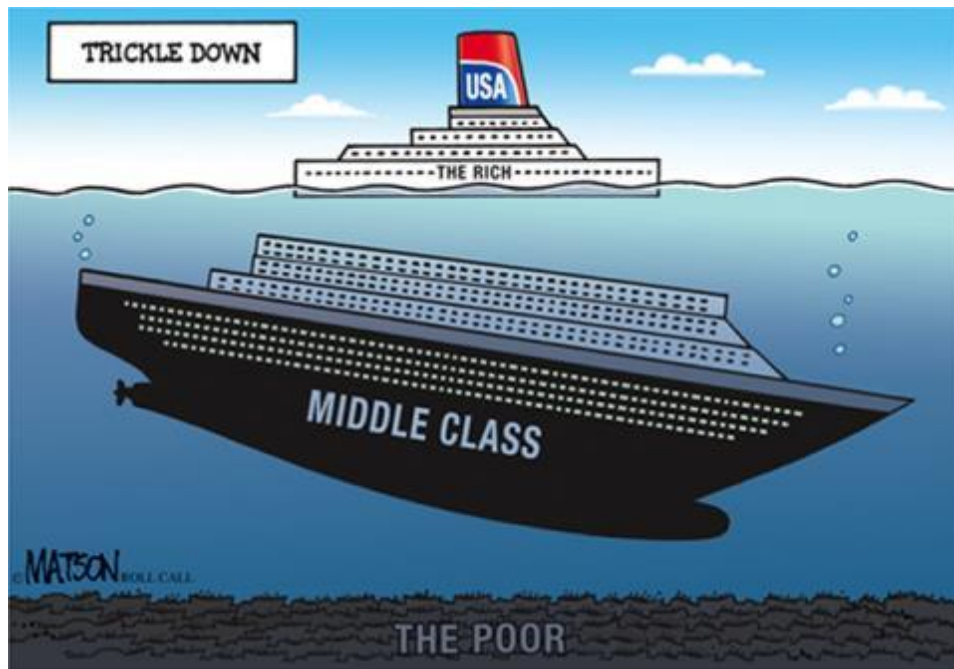
1. Sustained economic growth is the way to human progress

In neoliberal philosophy this growth is always defined as a global function. The global economy must continually increase in size, or the whole system will come crashing down. If that sounds like a Ponzi scheme⁵⁹, you're right, that is exactly what must be created to fulfill infinite growth on a finite planet. The finance industry has created a whole new realm of completely mythical money in order to keep the scheme going. This is the derivatives market that they have fought viciously to keep unregulated since its inception, since it is the magical space where infinite growth has blossomed into. There is now more debt created in this world than all the resources in the world could ever repay if the current system continues. This is the means by which the finance industry is attempting to trick the world into eternal debt slavery. This was made possible by that policy of government deregulation after already using a fiat currency and a fractional reserve banking system.

The debt is not real and should be treated as such.

2. Free markets without government interference would be the most efficient and socially optimal allocation of resources

⁵⁹ <http://www.sec.gov/answers/ponzi.htm>



This idea relies on the myth of the ‘invisible hand’ of the market acting in outright mystical ways to control itself. The term ‘globalism’ has been used extensively as a cover for the spread of neoliberal philosophy⁶⁰, the media message being that the global economy raises poor countries out of poverty. The reality has seen western neoliberal countries experience static or decreasing wages as jobs are shifted to the cheaper locations in Asia, South America and Eastern Europe. The wages and bonuses of executives of these corporations have been a notable exception to this standard. Where everybody else is told to bear with the pain for the sake of globalism; executive pay accounts for the vast majority of pay increases in a western corporation – with US corporations the most inequitable. This has been a feature of neoliberal governments worldwide and a hallmark of the conspiracy of greed.⁶¹ Simply put, the executives are deemed by those in control to be the most valuable employees of the company as they guarantee delivery of profits to the shareholders.

The problem is, ‘those in control’ ARE the executives handing themselves ever increasing salaries and bonuses. They are also a significant proportion of the shareholders for whom they purport to work. Which leads to another important question; who exactly are these shareholders that we are told all corporations must dedicate their existence to serving? We are led to believe by mass media that anybody can buy shares, therefore most people do and benefit from this system. The truth is very different.

“The top ten percent have 81% to 94% of stocks, bonds, trust funds, and business equity, and almost 80% of non-home real estate”⁶²

This statistic is from the US in 2010 and goes to explain completely the often quoted statistic that the rich suffered more than the poor in the crash of 2008. The truth is the top ten percent of the population bore the brunt of the share market crash because they owned almost all the shares. They have now largely recovered, whilst the fortunes of the majority of the population have not.

⁶⁰ <http://www.uq.edu.au/economics/johnquiggin/JournalArticles99/GlobalisELRR99.html>

⁶¹ <http://features.blogs.fortune.cnn.com/2012/03/11/why-chief-executives-pay-keeps-rising-fortune-1985-2/>

⁶² <http://www2.ucsc.edu/whorulesamerica/power/wealth.html>

The same trend is true in Australia with just 38% of the population owning any such investment and of those, the majority are held by people in the top ten percent of income earners – about 15% of the total population.⁶³ This shows that Australia is not as extreme in terms of this wealth inequality, but not for a lack of effort by increasingly neoliberal inspired governments.

So we do not see any socially optimal or efficient allocation of resources, we see a permanent flow of wealth to the top that then gets hoarded and transported to offshore accounts as soon as possible. There is at least \$21 trillion hidden offshore in 2013, untaxed and kept for the wealthy hoarders.⁶⁴ If this money had been used to provide living and reasonable wages for the population as a whole instead, we would have a significantly happier global society today. This also puts lie to the idea that the western world must suffer as the rest of the world improves their quality of life. There is no need; there are plenty of resources to achieve both.

The reality is that as companies have become larger and spread around the world, they have been able to dedicate more and more resources to guaranteeing that the market is not free, but is entirely under their control. This has been achieved by:

- Anti-competitive behavior across every industry creating many environments where a dozen companies are allegedly competing, but are all actually owned by one larger organization that sets pricing as required.⁶⁵
 - This involves price fixing to drive competitors either out of business or so close to the wall that a buyout can be enacted cheaply.
- Regulatory capture across many countries where a supposed neoliberal uses government handouts, subsidies and legislation to create artificial monopolies.
 - Ignoring the fact that this clashes with the philosophical desire for a free market is an integral part of the modern movement.
- Capture of mass media outlets globally that are then corrupted to reinforce neoliberal ideals of greed and selfishness over empathy and social concerns.

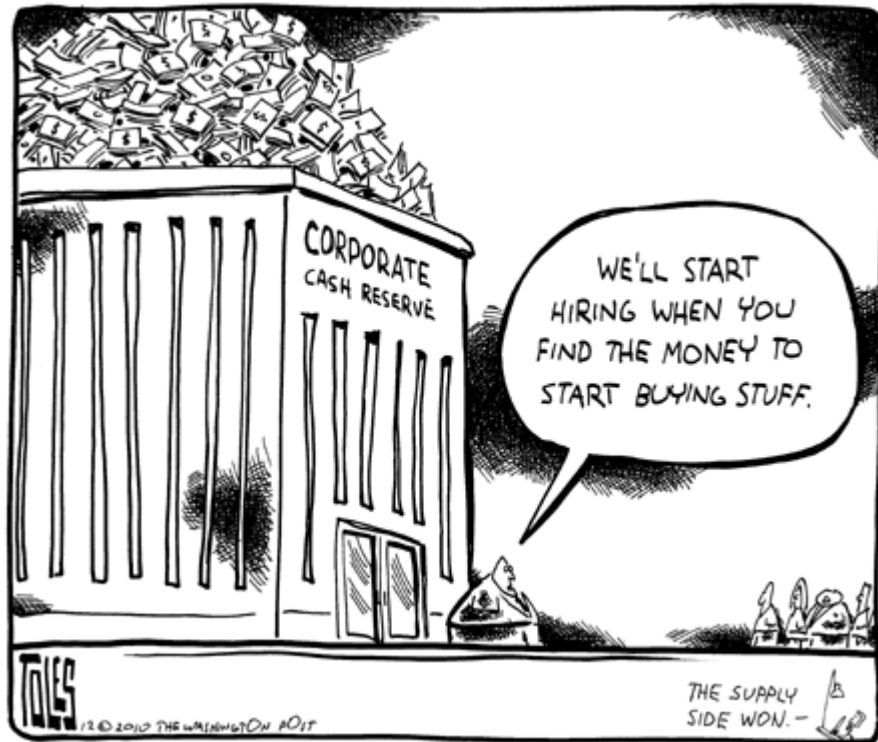
If the neoliberals really wanted a free market, the government would be required to heavily regulate any company that became large enough to act in this way. The regulation would take the form of removal of all government support in favour of forcing them to compete effectively in the marketplace through innovation. Their philosophy of 'free market' only refers to freedom from interference from the government; it is not concerned with the inevitable result of the corporate control of society through debt slavery in what is being called neofeudalism.

'The Shock Doctrine' is one of many sources that shows clearly the lie of 'trickle down economics' that are meant to occur after destroying unions and allowing labour to be used from the cheapest source in a global economy. What has actually happened is the extreme concentration of wealth in the hands of those very few corporations followed by the creation of artificial debt laid on the shoulders of the people to create permanent slaves. The system works very well if you are one of the 1% at the top and very badly for everyone else. This has always been the intended result; it just isn't put forward in the sales pitch.

⁶³ <http://www.asx.com.au/documents/resources/asx-sos-2012.pdf>

⁶⁴ http://www.nytimes.com/2013/04/05/world/europe/vast-hidden-wealth-revealed-in-leaked-records.html?_r=0

⁶⁵ <http://pieceoplastic.com/index.php/5333/big-corporations-own-health-food-companies/>



3. Governments should mainly function to provide the infrastructure to advance the rule of law with respect to property rights and contracts and maintain a national defence force.

This element is borrowed directly from the classic liberal economics approach that seeks to restrict the intrusion of government into daily life. This is the core of the argument to provide either zero or minimal social welfare within the country; the idea is that people should work and earn their way to buy whatever they need or want. The problem with this idea is that neoliberal governments understand that rapid removal of social welfare programs would likely cause extreme voting backlash. The secondary issue is that neoliberal economists have a wide array of opinions of this ranging from near anarchism to authoritarian extremes.

The resulting systems have been equally diverse, from totalitarian dictatorships in South America and Asia to western social democracies, we have seen a wide spread of programs implemented. The common feature of all of them has been either the elimination or gradual reduction of social welfare programs. This has been combined with an equal increase in subsidies, tax exemptions and legal loopholes for large corporations to not only avoid tax, but actually claim taxpayer's money in benefits.⁶⁶ Whilst the stated aim of the neoliberal philosophy is to encourage free markets and reducing the size of governments; the reality has been the implementation of a corporate welfare system where taxpayer's money is redirected upwards to add to profit margins.⁶⁷ Those profit margins are then distributed to shareholders and investors, so the flow of money from the poor to the rich is accelerated.

The stated aim of neoliberal philosophy to benefit all business is never met or acted upon, small businesses and startups have suffered immensely under neoliberal governments.⁶⁸ The benefits government offers are soaked up by corporations to allow them to actively undermine competition, prevent innovation and generally ensure the market is not free. This does not

⁶⁶ <https://theconversation.com/the-tussle-over-australias-company-tax-16354>

⁶⁷ <http://www.bloomberg.com/news/2013-02-20/why-should-taxpayers-give-big-banks-83-billion-a-year-.html>

⁶⁸ <http://blogs.reuters.com/felix-salmon/2012/09/13/job-creation-where-are-the-startups/>

provide an environment that allows small businesses to start and flourish. The source of this hypocrisy seems to be the conflict between the culture of greed and any genuine economic theory. The economic theory of greed is that I want 'more' and having 'more' makes it easier for me to get 'more'. It's not hard to understand how quickly this overpowers any properly thought out philosophy in the mind of a psychopath.

At the same time that corporate welfare increases in many forms, people in genuine need are told that there is no budget to help them. They are told that 'Austerity' is the only way forward to improve their lives. They are told it is more important to give taxpayer's money to the rich than it is to use it to benefit society as a whole. The idea is that infinite growth and profits provide benefits for everybody and when you look at annual GDP for a neoliberal country, there is indeed more wealth generated each year. The problem is that it is being deliberately harvested and hoarded by an increasingly small percentage of the population. Wealth inequality tells the complete story that puts the lie to 'Austerity' as being anything but a tightening of the grip on power by the very rich.⁶⁹ It does not promote confidence in the market, it does not improve the outlook of any country that adopts this policy and it serves to cripple the economy for a longer period of time.⁷⁰ What it actually brings is horrific job insecurity and a workforce too scared to rock the boat as they take on longer working days for less reward.⁷¹ This problem is more extreme in countries that have adopted neoliberal principles for longer periods of time. The US is currently has an extreme of wealth inequality that shows the rising fortunes of the country have almost entirely benefitted just 10% of the population.⁷²

Average Household Income, 1967-2012

in 2012 dollars, by percentile

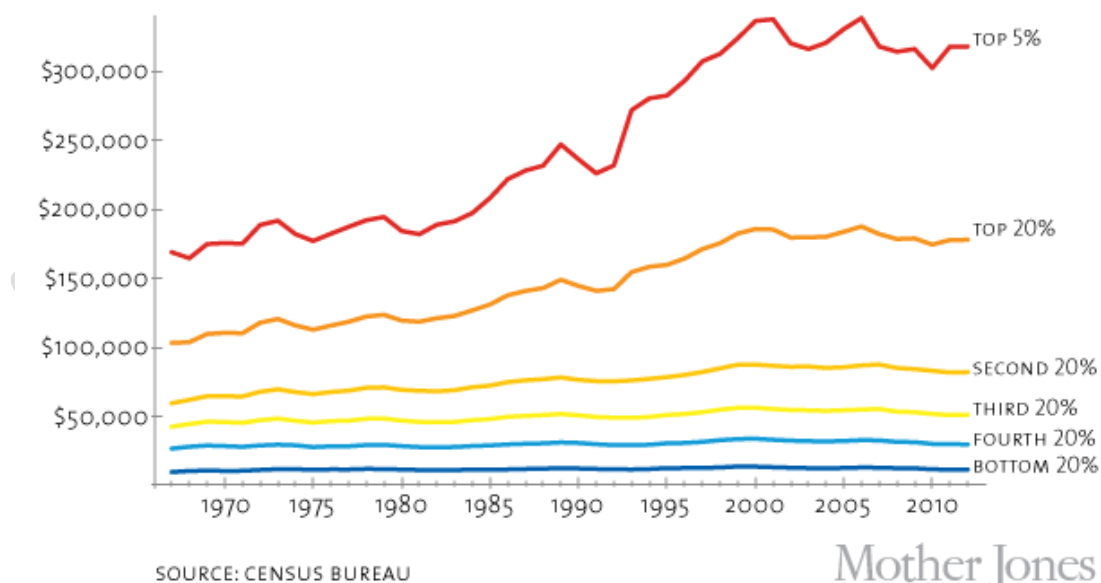


Figure 6: US Income distribution showing the change around 1983 when Reagan's neoliberal policies took effect.⁷³

⁶⁹ <http://www.etuc.org/speeches/europe-must-address-its-social-debt#.UxEiYvmSx8E>

⁷⁰ <http://www.bloombergview.com/articles/2013-06-06/austerity-principles-or-how-to-save-an-economy-in-crisis>

⁷¹ <http://www.abc.net.au/news/2013-09-04/donnelly-job-security-election/4934746>

⁷² <http://www.forbes.com/sites/louiswoodhill/2013/03/28/the-mystery-of-income-inequality-broken-down-to-one-simple-chart/>

⁷³ <http://www.motherjones.com/politics/2013/09/charts-income-inequality-middle-class-census>

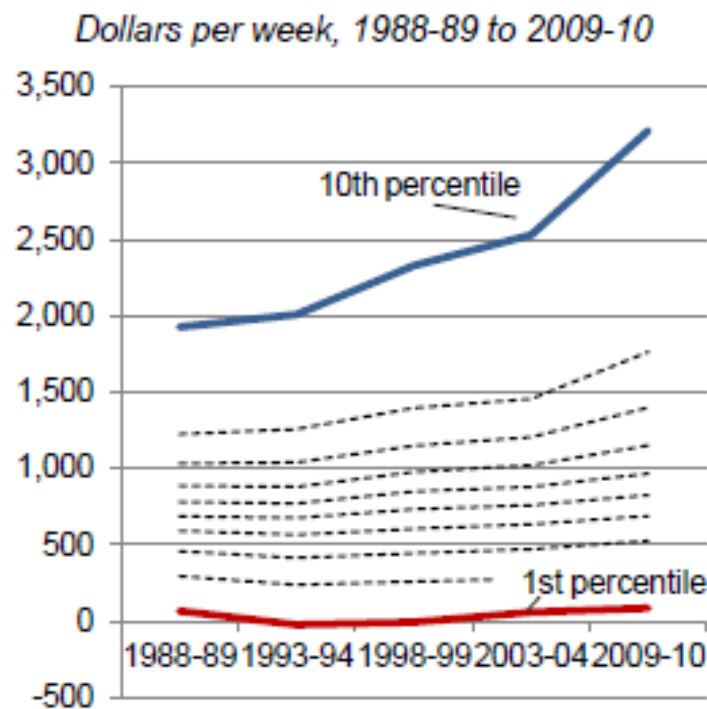


Figure 7: Australian Wealth Inequality.⁷⁴

Whilst these figures show the growth of inequality is not nearly as extreme in Australia, it does show the effect of the Howard government introducing further neoliberal reforms starting in 1996 and continuing for a decade afterwards. The most alarming element of this trend is that both the Australian Labor and Liberal Coalition have implemented a series of neoliberal policies since 1983. These have not been as extreme as in other countries thanks largely to the strength of the union movement and resistance of Australian culture to the neoliberal agenda. This has been exemplified by the trend since the early 1990s to vote away from these two parties. A hostile senate has been the standard since the late 1980s when many people realised the Labor party were betraying their egalitarian principles to follow the neoliberal agenda pushed by the US and UK governments at the time. When the Liberal coalition gained control of the senate in 2004, they used it to push more extreme neoliberal workplace reforms, “Workchoices” and resoundingly lost the next election in a defeat so broad that it meant the Prime Minister also lost his seat in parliament. Those reforms were acting to dismantle unions in all workplaces and were made according to ‘Right to Work’ laws passed across the US. Those laws have been found to be very effective at both destroying unions and reducing wages for employees; whilst increasing wages for business owners.⁷⁵

Australians have resisted the neoliberal agenda for decades, but this has only led to an increasing onslaught of tactics to try and fool the public into supporting policies that will not benefit them. Led by the experience of neoliberal governments in the US and UK, Australian conservatives have sought to use the media to create social division and a culture of fear. This has been to establish conditions more favourable for further neoliberal reforms that will only increase income inequality and lower living standards for the majority of citizens.

4. Change perceptions of public and community good to individualism and individual responsibility. The change is ‘for their own good’

⁷⁴ http://www.pc.gov.au/data/assets/pdf_file/0006/122496/income-distribution-trends.pdf

⁷⁵ <http://www.washingtonpost.com/blogs/wonkblog/wp/2012/12/10/how-right-to-work-laws-could-reshape-michigans-economy/>

This has been the job of global mass media corporations to sell and they have been disturbingly effective. Using Orwellian double speak strategies they have managed to cast many disadvantaged groups as the enemy of hard working, 'good' people everywhere. This has involved the creation of a culture of fear and hate for all things foreign and different. Scared people don't think very well. When you're permanently scared of losing your job that is your only means of supporting yourself and your family, you don't want to do anything to displease your bosses. When you have to work sixty hours a week just to have somewhere to live and something to eat, you don't have time to think. This makes the population extremely vulnerable to easy slogan based messages of fear and hate. This places the blame for your suffering and fear on 'them' and exonerates the neoliberal governments from any involvement. They claim that implementing neoliberal philosophies is the only way to beat 'them' and make life better for you.

The problem with the whole process is they are lying to the population from start to finish. There are other ways, there are many better ways; there is no justification to persecute disadvantaged members of society. The aim of neoliberal governments is to create a population dominated by fear and hate, whilst placing themselves as the only possible solution.⁷⁶ This is to make social control easier in order to herd the masses into an existence of permanent debt slavery - neofeudalism. The increasing similarity between western neoliberal conservatives and totalitarian dictators running a police state is disturbing.⁷⁷

5. There Is No Alternative (TINA): This is the only way to run a good society that enjoys all the benefits of infinite growth and profits.

First proposed by Margaret Thatcher in the UK as the basis for her 'conviction' politics, this has been an example of the principle that a lie repeated often becomes accepted as the truth. There are always other choices and the only people who accept and push this singularity of truth are religious zealots. It is certainly true that 'trickle down economics' was called 'voodoo economics' in the 80s, since there was absolutely no evidence of the idea being true – it was and is an article of faith of the neoliberal agenda. The fact of growing income inequality shows clearly that this view has no basis in fact or evidence and should be dismissed as the lie that it is.

2.5.5 Neoliberalism and Regulatory Capture

The primary advocates and beneficiaries of neoliberalism, a relatively small group of global financial institutions have been at the heart of pushing the philosophy⁷⁸. They in turn have recruited a number of multinational corporations from many industries to fund and promote the rise of fundamentalist and radical economic theory.

The governments that have fallen under their influence have a number of characteristics, but two primary ones emerge that define the reality of these states.

1. If any law must choose between supporting business or supporting the people and environment; then business is always supreme.
2. If any conflict emerges in society on any topic; then the business friendly view is upheld by the police and army.⁷⁹

These are not principles to be engaged with deliberate thought for each situation; it is the simple method by which the state determines its course of action – because that is what business is telling

⁷⁶ <http://news.discovery.com/human/dictators-control-psychology-111221.htm>

⁷⁷ <http://www.psychologytoday.com/blog/the-main-ingredient/201303/fear-vs-power>

⁷⁸ <http://13bankers.com/>

⁷⁹ <http://www.globalissues.org/article/39/a-primer-on-neoliberalism>

them to do. We must also define that 'business' in this context is not family run affairs that employ a few dozen people or less. They are corporations both national and multinational with highly paid lobbyists working on the government permanently.

The scope of this influence has come to be known as regulatory capture.⁸⁰ The fundamental idea is that over time the government regulator largely employs staff who used to work for one of the organizations they are meant to be regulating. What this means is that the work of the lobbyist moves from trying to influence separate individuals and groups who work for the government, to simply being the government and making decisions in favour of their industry. The mining industry in Australia is a particularly good example of this. Any attempts to tax or regulate are met with large, well-funded publicity campaigns that are used to justify the government complicity on not pursuing these goals.

The real problem is in trying to prevent this capture from occurring and creating safeguards for systems of regulation. The Austrian school of economics sees this as an inevitable problem of government interference in the market, the cure being to remove the government interference – the regulation. This has been shown to be even worse than regulatory capture as no industry that commands vast profits has ever self-regulated effectively. The current problem with major financial institutions being bailed out by the US government with no punishment or repayment made by either the organizations or the individuals involved tells a sad story of collusion.

2.5.6 Neoliberalism and Unions

Neoliberal philosophy has no place for unions. These organizations represent workers interests in large groups, something that corporations have no interest in tolerating. This would mean providing fair wages and working conditions for employees instead of cutting every cost. These cost cutting measures applied to salaries are said to be to deliver profit to shareholders, however the first destination has become corporate executive salaries. The next destination is executive shareholdings and then other shareholders. Workers have no place within this system. An ideal worker to the psychopathic corporation is a slave who must work for just enough food and care to stay alive until replaced.

This philosophy has resulted in an unrelenting attack on unions by all neoliberal governments, often blaming them for the problems created by neoliberal practice.

2.5.7 Neoliberalism and Education

The neoliberal attack on education system stems from the central idea that any social services are the preserve of private effort. Individuals should pay for what they want, it should not be provided as a community benefit. This idea has no foundation in reality and represents a complete failure to understand the principles of society and community. It is beyond the finances of the vast majority of individuals to fund a school. It is well beyond the finances of poor communities to do the same. Providing an education system from a broad tax base is the only reasonable and equitable solution. This was operating in Australia in the 1970s, but has been steadily subverted with each passing decade as successive neoliberal governments have crippled the public system with poor funding whilst providing incredible profit margins to private schools instead.⁸¹

The secondary problem is that the system of education needs to be reviewed entirely to deliver a different kind of graduate. The current system has been tilted to train obedient workers to fight each other for increasingly fewer jobs across society. The idea of entrepreneurs, creative workers, critical thinkers and collaborative organization is simply ignored and avoided. Yet, it is these very

⁸⁰ http://wiki.mises.org/wiki/Regulatory_capture

⁸¹ <https://theconversation.com/test-shock-is-our-education-system-failing-students-11308>

professions that offer the greatest advantages to Australia in the changing economy of the new century. There are examples in the Finnish system that provide guidance towards producing better results for all students and as a result for Australia as a whole. There are few private schools in Finland (and little desire for them) because the public system receives all the public investment and private schools cannot charge extra fees.

How Schools Kill Creativity

2.5.8 Neoliberalism and Healthcare

The neoliberal attack on healthcare comes from the same source as that on education – user pays is the only way. This fails for the same reason, individuals can't afford to pay for a whole health system. The method of government funding private health insurance means only that taxpayer's money goes to fund private profit margins instead of helping the people. If the private health insurance rebate provided by the government were redirected back to the public health system, the most significant funding issues would disappear.⁸²

2.6 The Global Economy is a Ponzi scheme⁸³



A Ponzi scheme is any financial deal which cannot ultimately deliver its promises, because it has no resources to do so. Instead of being a genuine investment, early investors are paid back with parts of the payments of later investors. At some point, there isn't enough new investment to keep the scheme going and it fails spectacularly. The entire global economy is structured as one today. Despite numerous warnings from many economists and academics, there is too much invested in the scheme by the rich and powerful to ever consider changing it without extreme force being applied by people around the world.

The global Ponzi scheme is based on ever increasing debt to compensate for the fact that we have long since run out of resources to back the money being created from thin air by government and

⁸² <https://theconversation.com/why-its-time-to-remove-private-health-insurance-rebates-16525>

⁸³ <http://www.globalresearch.ca/the-entire-economy-is-a-ponzi-scheme-the-global-financial-system-is-insolvent/5331143>

banks through the system of fractional reserve banking.⁸⁴ The total debt owed by all countries across the world is now over three times annual global production⁸⁵, see an active counter of the size of the debt [here](#). This means that if all the money in the world were paid to reduce this debt instead of being used in economies, it would still take over three years to pay it off – and during that time nobody in the world would have any income. This ridiculous situation is the means by which finance institutions and corporations are seeking to saddle governments and the people with the duty to repay this imaginary debt.⁸⁶

The global Ponzi scheme is primarily enforced by reserve banks operating in almost every country in the world. They control the creation and release of money based on the desires of the global finance industry, not on the requirements of any government or people.

2.7 The Australian Government



2.7.1 The Reign of Apathy

Australians don't care much for politicians or governments, which seems strange when you look at the incredibly regulated and government controlled society we inhabit. The level of apathy in the average voter is well documented, has been the status quo for decades and no significant change is apparent today.⁸⁷ There have been many recommendations to put more into the education system on the topic, to create more civic minded and active citizens; but actions are hard to find.⁸⁸ There is a new generation of young adults who are far more ecologically minded and focused on the unsustainable world they are living in. However, they are being more than balanced by the huge baby boomer population,⁸⁹ who have failed to provide for the future generations; instead leaving a

⁸⁴ <http://www.globalresearch.ca/the-wall-street-ponzi-scheme-called-fractional-reserve-banking>

<http://www.youtube.com/watch?v=8Fm5NSeVPog>

⁸⁵ <http://blogs.wsj.com/economics/2013/05/11/number-of-the-week-total-world-debt-load-at-313-of-gdp/>

⁸⁶ <http://www.rollingstone.com/politics/news/the-vampire-squid-strikes-again-the-mega-banks-most-devicious-scam-yet-20140212>

⁸⁷ <http://www.abc.net.au/unleashed/3788166.html>

⁸⁸ http://www.whitlam.org/_data/assets/pdf_file/0003/82776/whitlam_discussionpaper.pdf

⁸⁹ <http://www.changedrivers.com.au/Articles/generational-change.htm>

massive financial debt for their retirement years and even larger environmental debt with climate change.⁹⁰

This apathy and disconnection with politics has meant the majority of Australians do not understand the political system and their only engagement with it is at election times. This means there is no great pressure on politicians to do anything more than appear in public and on the media stating the party slogans repeatedly. Until the people of Australia demand more from their representatives, they will be stuck with the government they deserve.

2.7.2 Politicians disconnected with Australians

The fundamental conflict in world views between generations, global and environmental instead of local and selfish, causes even further distancing of most of the population from baby boomer politicians who cannot maintain any relevance or attraction for the new audience.

One third of Australians did not vote for either major party.⁹¹ If each major party only received a third of the votes, how did anybody form a government? Since 2010, minority governments are the new standard. Labor, the Greens and two independent members formed their first coalition in 2010 and then the conservative coalition of four parties won in 2013. So the truth is, Australia is really a six party system with small parties and independents making up the gap. It is clear that many Australians no longer follow either old party exclusively; a trend that has been growing steadily since 1990.⁹² In fact, the division of votes away from the two old parties has not been so extreme since the 1940 election, which was also the last hung parliament before the 2010 Gillard led government.

The reality is Australians are showing constant discontent with the old party actions, leadership and direction and keep voting away from them. The problem is that neither old party have showed much interest in re-engaging with the electorate; rather treating voters as ignorant fools who can be easily manipulated with campaigns based on slogans, lies and hypocrisy.

2.7.3 Campaigns of outright lies, hypocrisy and slogans instead of policies

The Liberal government formed in 2013 has been on a mission to implement the harshest neoliberal policies in the shortest possible time. Their strategy has come directly from the US Republican and UK Conservative party approaches used successfully to destroy their societies since the 80s. A fundamental aspect of the approach to the electorate has had standard features, these are:

- Create the appearance of emergency, catastrophe and disaster both real and impending
 - In Australia this has been the 'economic emergency' that doesn't exist. Every external commentator congratulates Australia on its very strong economy and masterful handling of the financial crisis by the Labor government that led us through it without major incident.⁹³
- Establish that only your party has the ability and intelligence to negate this catastrophe to give everybody a better life.
 - The Liberal party routinely claims that sound economic management is 'in its DNA' without providing any evidence to support the idea. In fact, there is far more

⁹⁰ <http://www.businessspectator.com.au/article/2014/2/7/economy/baby-boomers-have-failed-doomed-generation>

⁹¹ <http://www.abc.net.au/news/federal-election-2013/results/party-totals/>

⁹²

http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1112/12rp06/12rp06e

⁹³ <http://www.independentaustalia.net/politics/politics-display/time-to-end-tony-abbotts-deceitful-debt-scare-campaign,5175>

evidence to suggest precisely the reverse with multiple international bodies and economists soundly stating so on numerous occasions.⁹⁴

- Use this as the reason to impose neoliberal policies on the country as quickly as possible
 - This is disaster capitalism at work as explored in Naomi Klein's 'The Shock Doctrine' at some length in a well-researched and coherent piece of work.⁹⁵
- When this makes people's lives worse, explain that you need to impose even harsher neoliberal policies.
 - Be sure to have your corporate controlled media tell this story repeatedly to have the lie believed. Murdoch has worked in close partnership with the Liberal party to achieve these ends for decades.
- Throughout the process create a group or groups to blame for the problems of the nation and use every media appearance to reinforce this story.
 - Unions and foreigners are the standard targets and a war in another country helps justify the approach.
 - In Australia asylum seekers were made a target by the Howard government and their status has slid downhill ever since. This has formed a major distraction from any discussion of significant policy in Australia for over a decade.
- At no point let media publish the facts about neoliberal policies actually leading countries into deeper debt, greater inequality of wealth⁹⁶ and dramatically increase the percentage of the population slipping into poverty every year.⁹⁷
- Lie loudly and often in public, hypocrisy is best; people assume that the person loudly accusing would never perform the act themselves.
 - The Liberal party's list of outright lies exposed in just the first 6 months of the government formed in 2013 sets a record for the level of bare faced lying to the electorate ever made.⁹⁸ The silence of the Murdoch media on this topic tells you all you need to know about their bias.
- Under no circumstances announce a policy that describes precisely what you will do, keep it to vague slogans that promise abstract results that cannot be tested.
 - The Liberal party released a pamphlet before the election containing many empty promises with no details and no costed policies.

Whilst these tactics have become the mainstay of conservative politics in western countries over the last few decades, it is important to note the absolute lack of a response from the Labor party to any of these approaches. In fact, they have adopted the same approach of ignoring the question of policy to focus on saying whatever they think will gain them electoral victory – and then changing that story almost weekly without warning. Even the best intentioned program cannot be made to work without sufficient time to discuss and build a complete, working solution from what amounts

⁹⁴ <http://www.independentaustralia.net/politics/politics-display/we-really-must-talk-about-the-howard-and-costello-economic-disaster,5686>

⁹⁵ <http://www.naomiklein.org/shock-doctrine>

⁹⁶ <http://www.globalresearch.ca/the-consequences-of-globalization-and-neoliberal-policies-what-are-the-alternatives/7973>

⁹⁷ <http://links.org.au/node/1056>

⁹⁸ <http://sallymcmanus.net/abbotts-wreckage/>

to a diagram scrawled on the back of a napkin. The absolute lack of transparency has only led to increasing distrust of all political parties as they seem to operate independently from the desires and benefit of the Australian people.

2.7.4 Yes, but what will you do differently?

Election campaigns for the last decade have become a competition to say that one old party will not do what the other is doing. At no point has either stepped forward with a plan that works for the benefit of all Australians and explained it in enough detail for it to be understood. This lack of focus on policy and increased focus on expensive media campaigns that promote slogans has worked to undermine the democratic process more fundamentally than Murdoch's media stranglehold. We do not need to slip to the profoundly corrupt levels in the USA today where the candidate that raised the most money as a 94% chance of winning the seat in congress.⁹⁹ The fact that billionaire Clive Palmer can form a party and win seats in a federal election without once mentioning what he would do differently to other parties is testament to the power that campaign funding has on the results.

Negative campaigns focusing on how bad the other group is, without actually stating a policy, are undermining the electoral process disastrously. This trend must be reversed.

2.7.5 ...and how is that different from the other mob?

The combination of Labor adopting an approach of actively concealing policy and intentions, engaging in negative campaigns and adopting neoliberal principles have made it increasingly hard to distinguish between the two old parties. This is a fundamental driver to the current situation where people are voting more and more diversely, looking for a candidate who actually represents their interests. The growth in the 90s of the Democrat party, and then the Greens following the demise of the former has made real the division between the left and right wing of the Labor party of the 80s. The increasing tendency of the party to act along very similar paths to the Liberals has established that the right wing control has undermined the integrity of the party. The recent changes to the way Labor votes for its leader, to include a popular vote amongst members illustrated to point even more clearly. The members wanted a left wing Labor candidate, the right wing caucus instead placed their own representative in the leadership role.¹⁰⁰

The reason the two parties are seen to be almost the same is that neither actually stands consistently on policy promises to the electorate; largely because the electorate is not active or engaged enough to demand this change.

⁹⁹ <http://www.pirg.org/democracy/PDFs/campaignfinancebrochure.pdf>

¹⁰⁰ <http://www.abc.net.au/news/2013-10-14/matthewson-albo-shorten-and-the-democracy-baby/5020356>

2.8 Summary of Problems



When identifying these problems as the underlying features of the mass of confusion and conflicting views globally, it can become difficult to see how exactly they are acting to explain a diverse array of issues. The answer comes by mapping the symptoms of the specific issue back to the root cause of the problem to realize the answer is a lot simpler than it first appears. The following diagrams are intended as a way to link symptoms of the cause back to the cause in a logical progression, to visualize how the same causes manifest in a myriad of different ways. The aim is to show how the ideological roots are causing global problems in order to resolve the issue at its source rather than being constantly redirected to a particular local issue. That redirection is the aim of the neoliberal movement through their global media empires that seek to promote this worldview.¹⁰¹ If the general population is worrying about a factory closure or logging a heritage forest, then they will never be able to organize effectively against the fundamental problems.

The final diagram is looking at the future of the next 50-100 years if no action is taken to redress the balance. If we continue to let corporations do whatever it takes to scratch and ever increasing growth out of a finite planet, there will be massive consequences. Those consequences are, however, mostly avoidable if we choose a different path. If we start thinking towards Australian solutions to the global problems, real progress can be made quickly enough to change the course of the worst problems of climate change and the energy trap. The underlying issue is that in order to make progress addressing the global catastrophe, the neoliberal ideology must be rejected and undone in every nation.

The fundamental problem is that a single ideology is actively preventing the change we need, so it is the central problem to be addressed first. It is the mental wall that must be destroyed to give all of us quality of life a century from now.

¹⁰¹ <http://robertreich.org/post/72770488951>

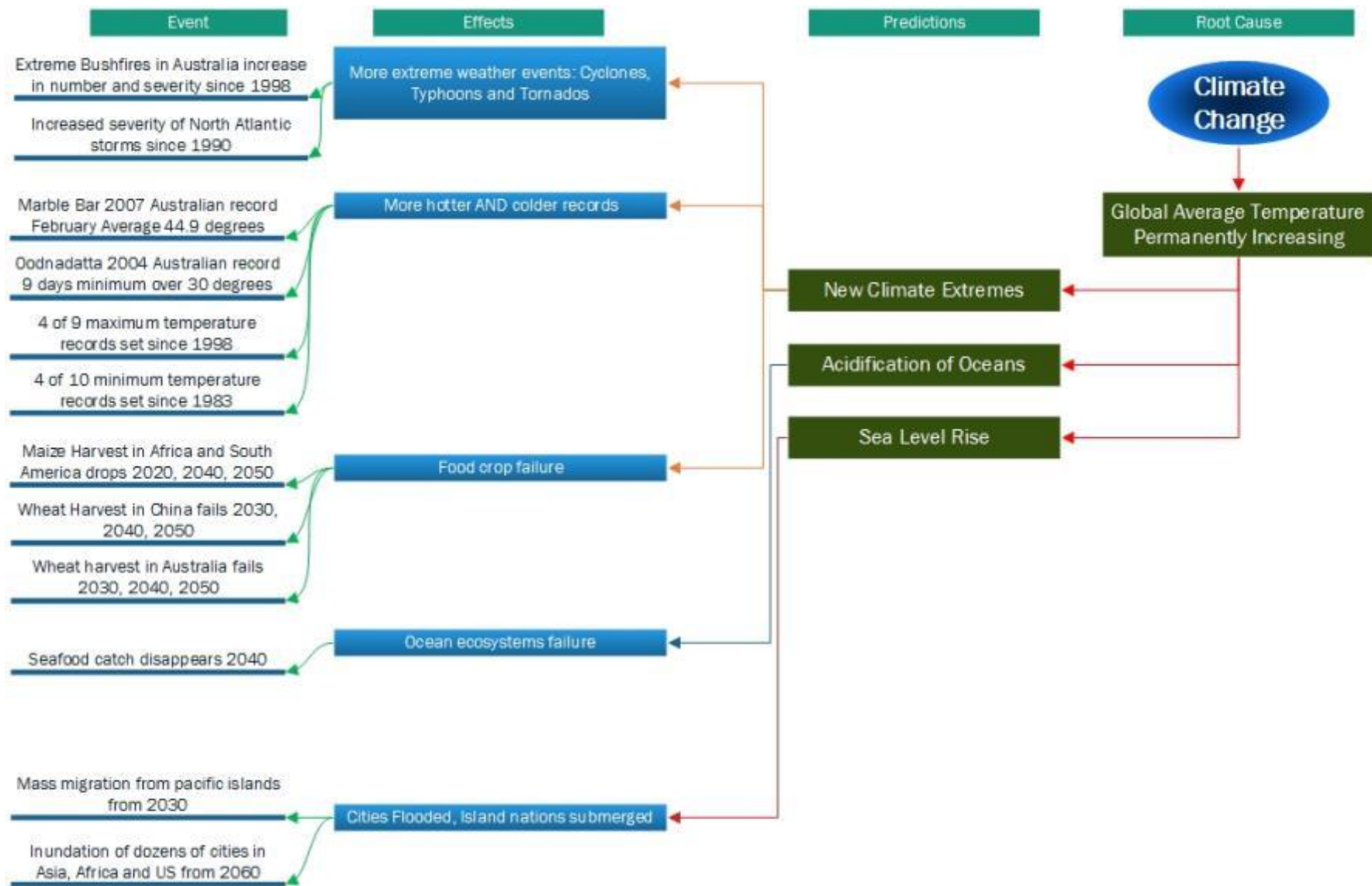


Figure 8: Climate Change Symptoms Mapping

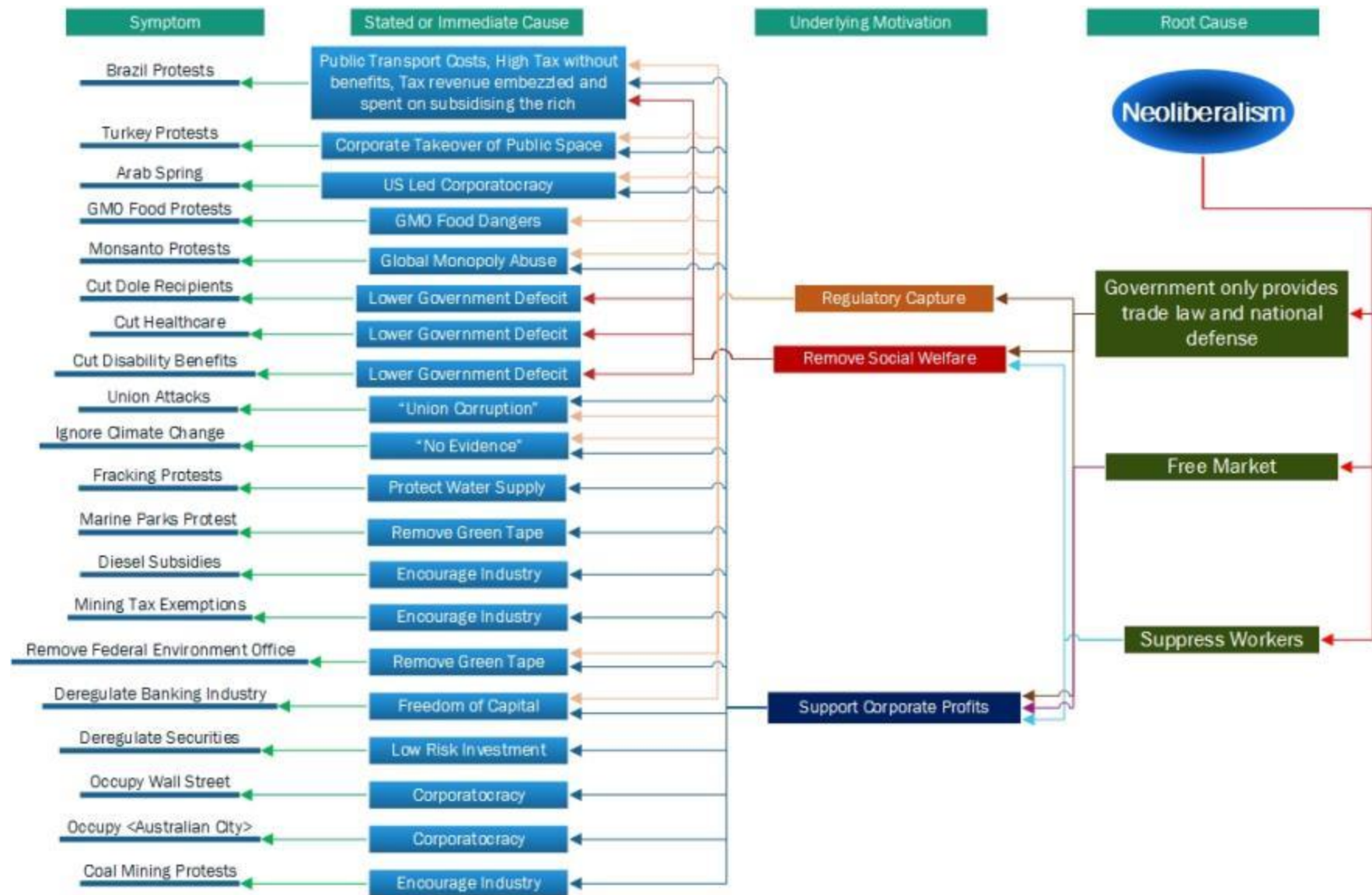


Figure 9: Neoliberalism Symptoms Mapping

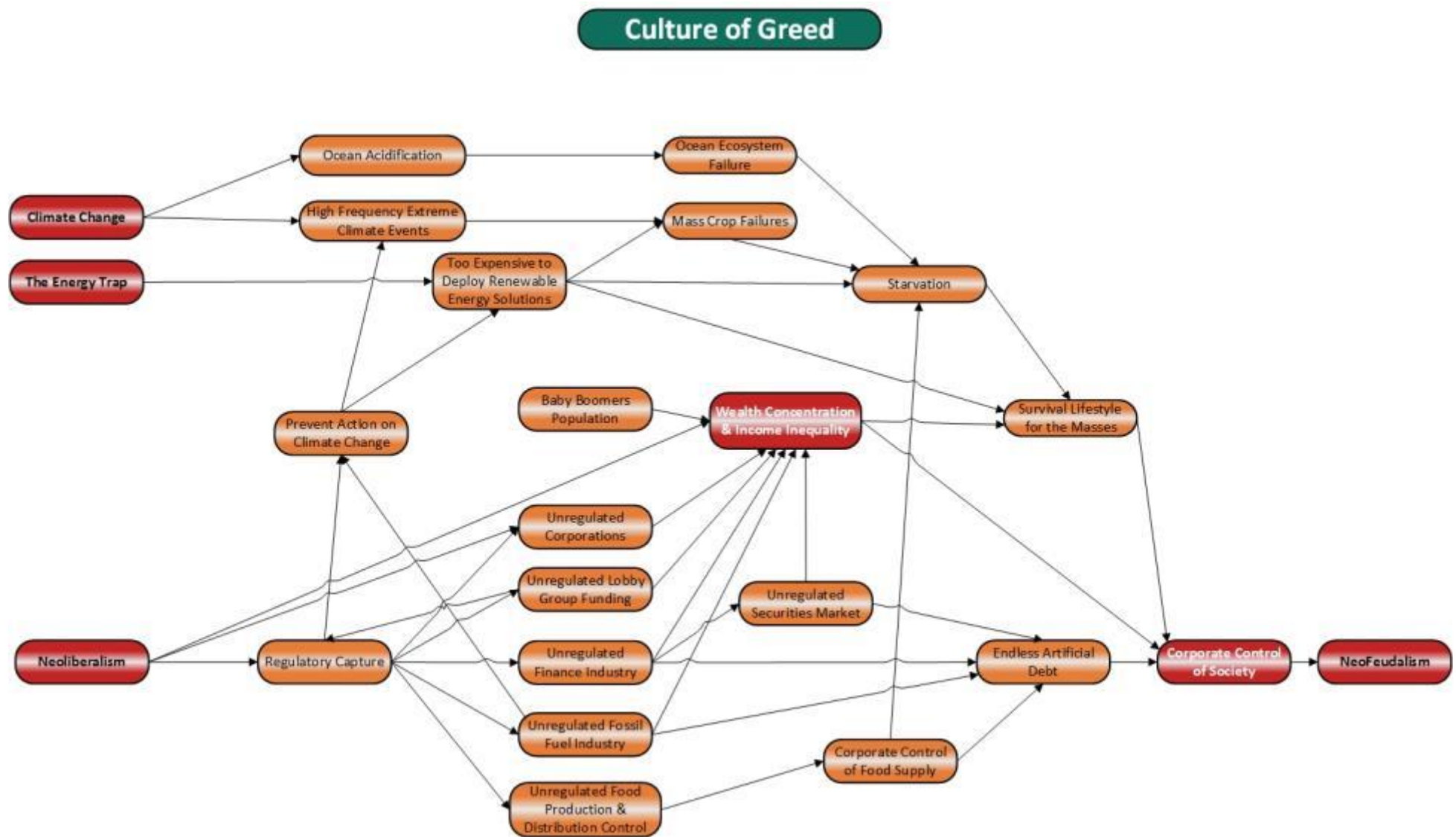


Figure 10: The Real Price of Uncontrolled Greed

3 Define the Solutions:



All solutions proposed in this document are intended to form the beginning of a conversation. Nobody has all the answers to every detail right now; we are creating the future every day.

Instead of being confused at how and why things have gone so wrong, we can start looking ahead clearly and consider our actions to correct our pathway into the future.

These are intended to set the goals we need to work towards as much as the problems section has highlighted what we need to avoid.

At the heart of a new, global, collaborative way of thinking, we need to seriously consider what kind of world we would like to leave for all our children and grandchildren. We are only caretakers of the world for a short time; we must all protect the earth for all of the amazing diversity of life it sustains.

3.1.1 Tempering Greed with Empathy

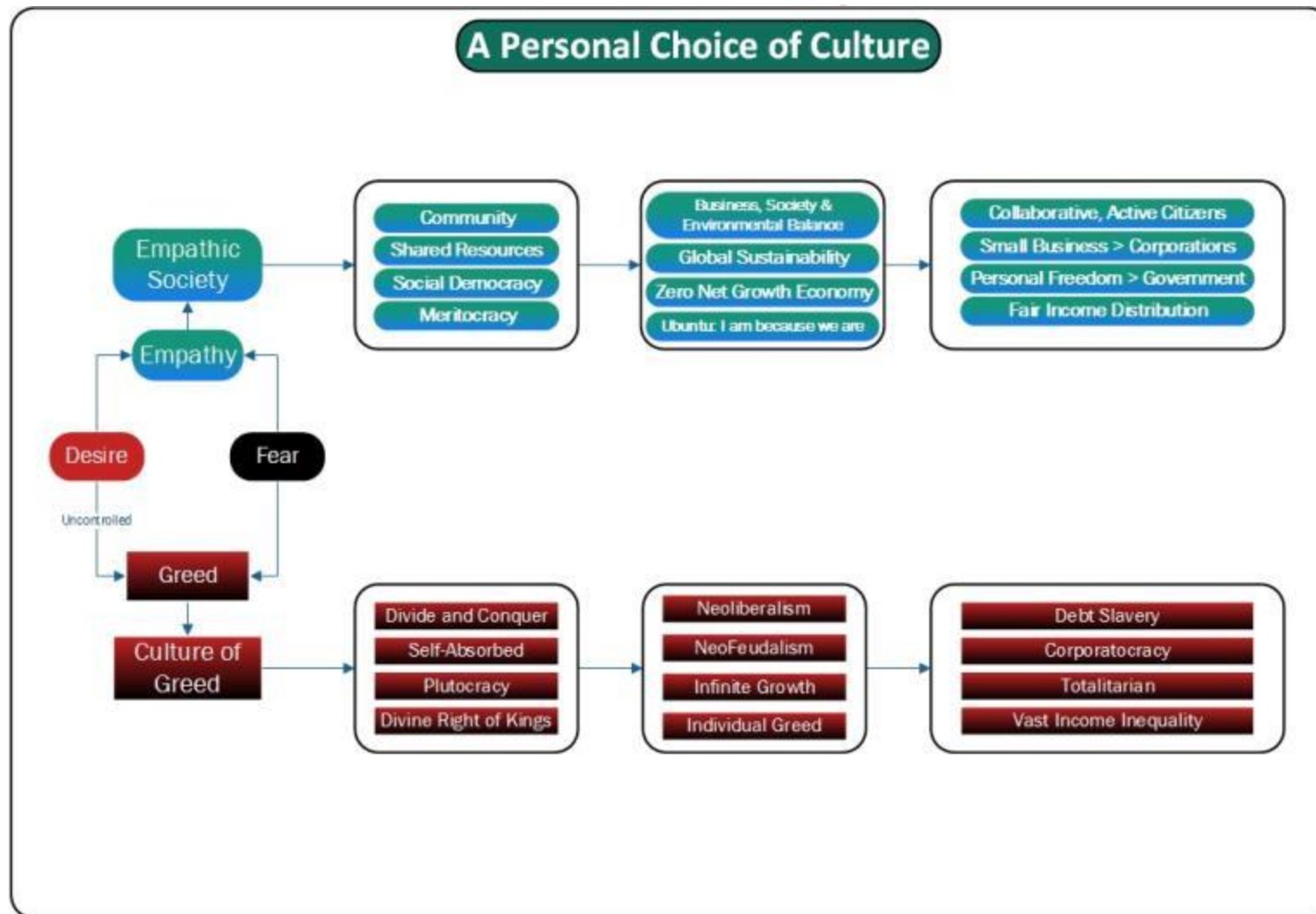


Figure 11: A Personal Choice of Culture

This is not an attempt to tell everybody to stop being greedy forever. Such a claim would be ridiculously unworkable and also ignores the lessons of history. Greed can be a useful source of energy and inspiration for many people, but not when it is uncontrolled; then it is only self-destructive. It needs to be tempered and balanced with empathy. It needs to evolve to the greater concept of Ubuntu, “I am because we are”.¹⁰² There is no problem with an individual operating for self-interest when that action ends up benefitting society at large; the place for government intervention is to ensure that benefit is spread to the greater society. The claim that these selfish individuals will somehow pay it back of their own volition has been shown consistently to be a barefaced lie. For every billionaire philanthropist, there are a thousand more that actively refuse to use their fortune for the benefit of anybody but themselves.^{103 104} This recognizes the debt that all people, businesses and corporations owe to the societies in which they operate and requires a repayment of that debt in kind.¹⁰⁵ Social and Environmental debt cannot ever be repaid completely as it is a permanent feature of operating within society and the world.

[The Empathic Civilization](#)

¹⁰² <http://www.peuplesawa.com/fr/bnnews.php?nid=1987>

¹⁰³ http://www.salon.com/2013/12/14/the_wealthy_give_to_charity_elite_schools_and_operas_partner/

¹⁰⁴ <http://www.theaustralian.com.au/business/wealth/charity-begins-elsewhere-for-richest-investors/story-fnikkvaf-1226654777499>

¹⁰⁵ <http://unchronicle.un.org/article/settle-social-debt-owed-people/>

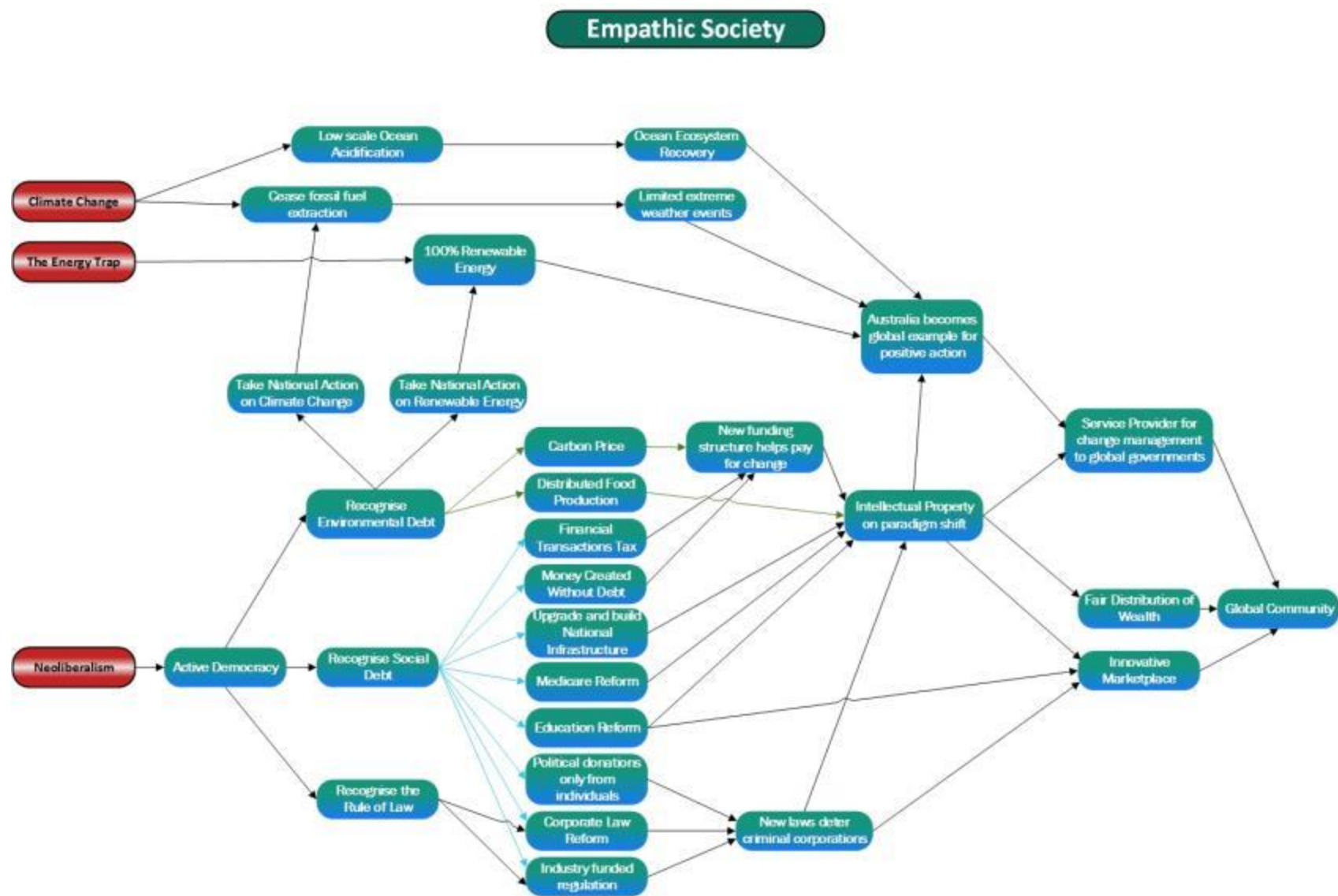


Figure 12: The Future with an Empathic Society

3.2 Solution Summary

In order to guide the solutions to this array of problems, we have to define a general set of principles. These will act as the test points to establish how well a proposed solution will align to the goals of producing the desired outcomes. Rather than providing a set of guidelines, here are the questions to ask of any solution to determine its alignment.

Not every question is directly relevant to every solution, but there should be a connection along the pathway along the lines of the above diagram. This diagram is meant as an aid to visualizing the connections between different actions and elements of the solution. It is not intended to be the complete picture of the final outcome; that picture must emerge and evolve in all its complexity over time and collaboration with the larger population. This is the sketch aimed to inspire the masterpiece.

Does this encourage a national and international community of collaboration?

Does this actively discourage and punish uncontrolled greed?

Does this provide the environment for everyone to collaborate freely on any issue?

Does this recognize and pay the Social Debt of participating in society?

Does this recognize and pay the Environmental Debt of living on this planet?

Does this recognize that we inhabit a finite world of limited resources?

Does this seek to improve quality of life; without reducing quality of life for others?

Does this provide all people with equal diversity of opportunity?

Does this encourage active and engaged citizens of society?

Does this cater for the whole population, or serve the interests of a few?

If the answer to any of the above questions is not determinedly positive, then the proposed solution requires modification to address the gap. That solution and revised solution must come as a collaboration of interested people and organizations.

In the interests of starting that conversation productively, here are some high level approaches to solving this array of problems. The links included point to the huge array of people and groups that are already working on the answers.

Please....get connected to the collaboration that must come to design our future.

There's one last point to make in introduction. If you think that the world will be changed **solely** by changing individual personal behaviours, then the change you want will never happen in the timeframe it needs to be.¹⁰⁶ Individual contribution to pollution and over consumption are generally a third or less of the total impact of any technology. Waiting for industry to change by driving consumer demand is the argument of the apathetic; it will not deliver change in the scale of a few decades. We need to force industry to change quicker than that and to take a leading role in building our new millennium.

3.3 Reduce Energy Demand

In order to fully move to a sustainable economy we need to do more than simply change the energy source from fossil fuels to renewable energy. We also need to redesign our built environment to require less energy over time. This change must also happen far more rapidly than the idea of

¹⁰⁶ <http://www.orionmagazine.org/index.php/articles/article/4801/>

changing consumer demand will allow; which means industry must be forced into the change by a combination of carrot and stick approaches. There must be rewards for adopting the changes required early and there must be increasing punishments for delays – beyond the slow move allowed for by consumer demand.

3.3.1 Remove Fossil Fuel Subsidies

As a part of increasing the cost of fossil fuel use, we also need to remove all subsidies, tax breaks and assistance for all fossil fuel extraction and transport companies. They will pay full price, when they inevitably raise their prices, a five to ten year program can be embarked on to directly compensate consumers. This program should wind down each year to force industry to move and consumers to demand new solutions. Industry needs to be made to hurt first and longest to force the change.

If large mining businesses threaten to leave, encourage them to do so as they can be easily replaced. They can't mine Australian resources in another country. It's time to call their bluff as Denmark and Norway already have. The Danish government imposes a 62% profit tax on oil extraction companies and uses the money to fund national infrastructure changes.¹⁰⁷ Norway established a sovereign trust fund in 1990 when North Sea oil extraction took off, in order to provide for the nation's future. In January 2014, that fund is the largest sovereign wealth fund in the world, at around AUD\$936 billion.¹⁰⁸ By restricting expenditure of the fund to an annual rate of just 4%, the government hopes to preserve it indefinitely to help Norway through future difficulties. That 4% limit now amounts to around AUD\$37 billion in government spending every year, which does not need to be funded by taxation. Australia would do well to learn from this example and many global organizations such as the OECD and the IMF have called for our governments to do exactly that.¹⁰⁹ This fund could help to level out dips in commodity prices and export volumes, assist the next twenty years of baby boomers entering retirement and building a source of permanent funding for national infrastructure projects.¹¹⁰ This must be considered completely separately to private superannuation funds in Australia that total more than AUD\$1.7 trillion in early 2014.¹¹¹ These funds will not be used in the national interest, they are held by millions of Australians to help fund their own retirement needs.

The fact is, Australian mining companies are over 80% owned by foreign investors. Of the total current average annual mining profits of around \$53 billion, \$37 billion goes to foreign investors and at least \$7 billion of that leaves Australia every year.¹¹² These profits can only be earned once. We must remove subsidies and enforce the super profits tax like Norway in order to grow a sovereign fund.

3.3.2 Carbon Pricing

The real aim of carbon pricing schemes is to get off fossil fuels; this is a way of introducing direct, artificial costs to the market to drive prices up ahead of the natural cost increase as resources dwindle over the next fifty years. This increasing price makes the products unattractive to consumers, who will become more and more active in looking for alternatives. When this idea was first proposed in the early 90s, the focus was on minimizing the burning of carbon that results in

¹⁰⁷ <http://uk.reuters.com/article/2013/09/18/northsea-tax-idUKL5N0HE0EW20130918>

¹⁰⁸ <http://www.abc.net.au/news/2014-01-09/all-norwegians-become-millionaire-shareholders-in-world27s-big/5191480>

¹⁰⁹ <http://www.theaustralian.com.au/business/economics/dont-waste-the-mining-boom-imf/story-e6frg926-1226046573990>

¹¹⁰

http://www.aigroup.com.au/portal/binary/com.epicentric.contentmanagement.servlet.ContentDeliveryServlet/LIVE_CONTENT/Economic%2520Indicators/Research%2520Notes/2010/Sovereign_wealth_fund.pdf

¹¹¹ <http://www.superguide.com.au/comparing-super-funds/smsfs-lead-the-super-pack-again>

¹¹² <http://thehoopla.com.au/mining-profits-facts/>

higher atmospheric concentrations. Whilst this is still a desired immediate result, the further understanding of the energy trap shows that we have even less time to act on the immense task of changing our society away from relying on fossil fuels. This means we must accelerate the process to catalyze the required change. This means emissions trading schemes are far less useful than carbon pricing schemes in driving the desired change.¹¹³ We need a fixed price that ratchets up every year to provide certainty to business of the inevitable need to migrate off fossil fuels. This process would also increase demand from all citizens to move away from services experiencing ever increasing prices. We would experience this anyway by following the natural exponential price increases caused by resource depletion, but using a carbon price to drive change earlier has three greater benefits:

1. We can escape the energy trap and make the move before we run out of resources to do so.
2. We can lessen the overall pain of this immense change to society and technology over the next thirty years.
3. Revenue raised can go directly to the infrastructure projects required to effect the change.

The important point to remember is that this approach can lessen the pain, but will not remove it. Global change of this magnitude is going to cause many problems. Being aware of the nature of the change and planning for it now, while there's still time, can improve Australia's prospects dramatically. Once our own future is planned out, we have a platform to share the knowledge and schedules with other countries to provide expert assistance where required.

The largest question in the world of carbon pricing is where to set the price and what it should be. Industry always wants it low, the reality is, it should be much higher, closer to US\$150 a tonne in the short terms and steadily increase from there.¹¹⁴ There are multiple reports on this that place the Australian price, which is just \$26, as one of the highest today. Conservative predictions from the US government place the price of fossil fuels increasing 3% per annum cumulatively between 2011 and 2040.¹¹⁵ This means that the prices will have doubled by 2027 and tripled by 2037. That leaves just twenty further years beyond that point until resources would expire completely and the prices would grow even more rapidly and exponentially over that period. With renewable energy solution costs already matching or running lower than fossil fuels today; this tells us the time to move is now.

Australia's emissions in 2013 are estimated to be around 550 million tonnes.¹¹⁶ This equates to total possible revenue of around \$13 billion at the current \$24 a tonne carbon price. The actual reported revenue for 2012/13 was \$4 billion. This was in line with estimates and was expected to climb to over \$6 billion in 2013/14 and raise around \$24 billion over the first four years.¹¹⁷ The reality is the scheme is aimed to move to a floating price connected to the European market in 2015 and that price will be less than a quarter of the Australian fixed price. In short, this scheme cannot work to achieve the desired results with such a low price. Whilst removing it would provide no benefit, its current form also provides limited scope for driving real change fast enough.

If Australia was to apply the level of tax that is really required to drive change, around \$150 a tonne, the annual revenue would leap to \$25 billion a year if current carbon emissions levels are maintained. If Australia maintained the current scheme and kept increasing the price per tonne by

¹¹³ http://www.lse.ac.uk/GranthamInstitute/publications/Policy/docs/PB_case-carbon-pricing_Bowen.pdf

¹¹⁴ http://www.oecd-ilibrary.org/environment/effective-carbon-prices_9789264196964-en

¹¹⁵ <http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2013&subject=0-AEO2013&table=1-AEO2013®ion=0-0&cases=ref2013-d102312a>

¹¹⁶ <http://www.climatechange.gov.au/climate-change/greenhouse-gas-measurement-and-reporting/tracking-australias-greenhouse-gas-emissio-0>

¹¹⁷ <http://www.bloomberg.com/news/2012-05-08/australia-predicts-a-24-7-billion-carbon-revenue.html>

15% per annum, we would reach the \$150 a tonne level in 2027. This is a level that would actively push consumers off fossil fuel use before the price will naturally rise. In reality, the driving concern of the level of the carbon price should be to raise enough revenue to enable the change to 100% renewable to occur steadily over the next thirty years.

This will make the change before the energy trap closes and before carbon levels in the atmosphere rise high enough to cause over four degree global warming and the climate catastrophe that would represent.

3.3.3 Energy Efficient Buildings

Australia's building regulations need a major overhaul to make a very significant contribution to the reduction in energy consumption. Beyond Zero Emissions have conducted a comprehensive review of Australia's building codes and produced a report that addresses the issues and calculates the overall effects of implementing change across existing buildings. This would involve defining a better standard for many aspects of the building including air-conditioning, insulation, lighting, electricity and gas supply, materials and other efficiency measures. The retrofitting would occur over that time period for existing dwellings to deliver the overall improvements across the nation.

For a total market investment of \$234 billion over fifteen years (or about \$15 billion a year), the return is reduced utility bills of around \$15 billion a year from the end of the program onwards. So over a time period of just 30 years, the program would pay for itself and then start reaping new benefits. This investment would not need to be government funded, in fact, considering that the annual market expenditure on renovations is already over \$30 billion a year; it would be distributed to individual households as an evolutionary change.

Creating a requirement for all buildings to produce a percentage of their own electricity supply would also drive the right behaviours. Setting this level at 50% for residential buildings and 30% for industrial buildings, then slowly increasing the requirement over time would also take the load off centralized generation facilities. This kind of behavior shift is already envisaged in the 100% renewable energy plan that Beyond Zero Emissions also produced.

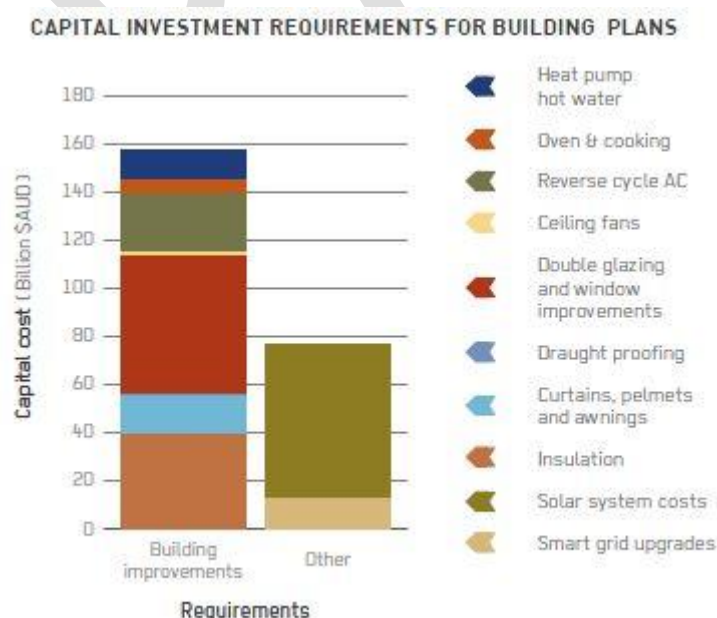


Figure 13: Sustainable Buildings

3.3.4 Measures of Progress – Energy Demand Reduction

The measures of progress for this section are:

1. Existence of a Carbon pricing scheme

- a. Simple 0% or 100%

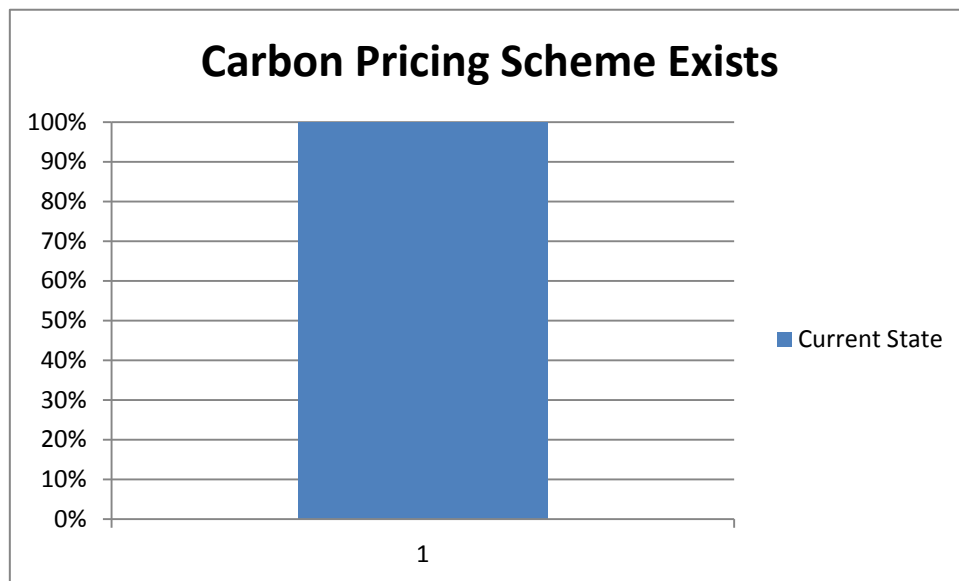


Figure 14: Carbon Pricing Scheme Measure

2. The setting of a carbon price high enough to:

- a. drive real industry change
- b. provide funding for the switch to renewable energy

We will set a level for this to be AUD\$150 per tonne, based on the global studies and measure progress to reach or exceed 100%

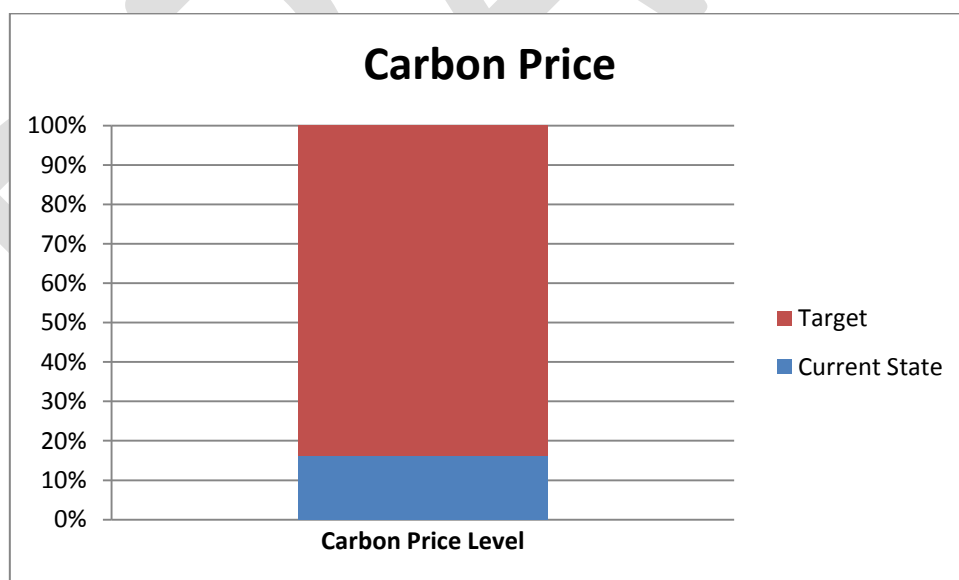


Figure 15: Carbon Price Measure

3. The level of subsidies for fossil fuels themselves in any form to reach zero.

- a. When the measure reaches 100%, there are no subsidies available from the government for any fossil fuels

- b. The starting point is the level of subsidy paid in 2013. This is hard to determine precisely, with some disagreement on what to include as a subsidy.¹¹⁸ Looking at multiple data sources, a level of \$11 billion per annum seems a reasonable estimate.
 - i. In the first edition, this progress must be zero as we are still at the starting point.

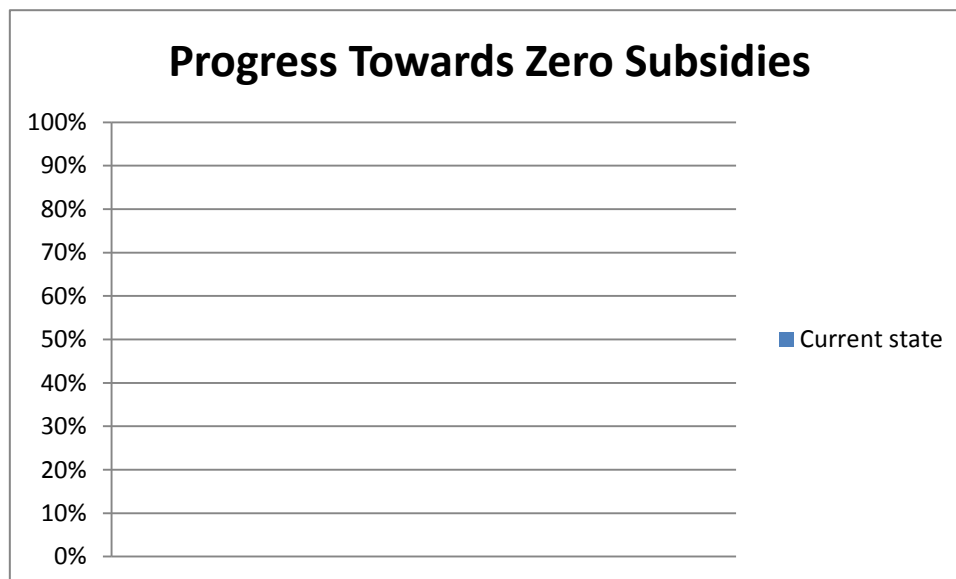


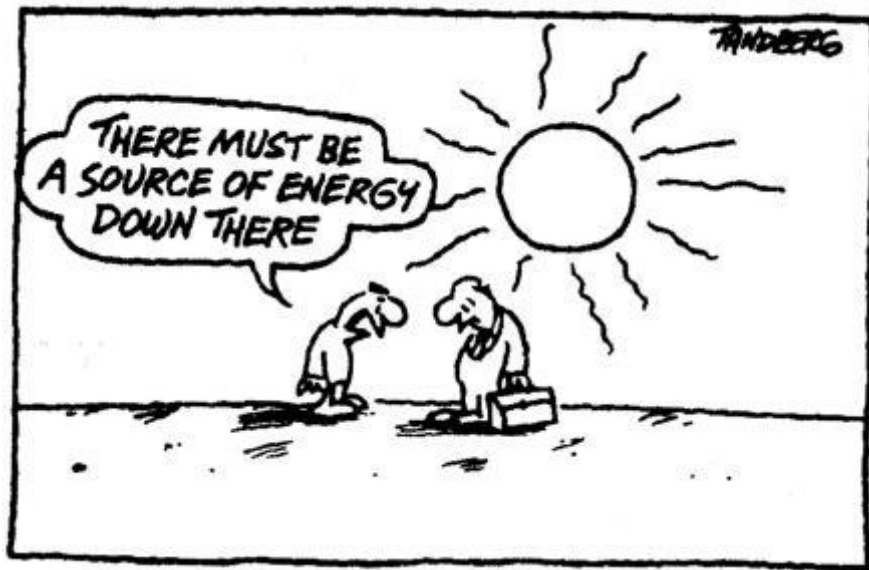
Figure 16: Zero Fossil Fuel Subsidies Measure

- 4. Building Regulations modified nationally to accommodate better standards for:
 - a. Air-conditioning, Lighting, Ovens and appliances
 - b. Passive design
 - i. Insulation, building materials
 - ii. Orientation, windows, shading
 - iii. Thermal mass

Since 2013 is the starting year, there are no measurements to be made yet.

¹¹⁸ <https://theconversation.com/subsidies-for-unburnable-carbon-need-to-go-up-in-smoke-13458>

3.4 Electricity Production



3.4.1 Australian Electricity Consumption

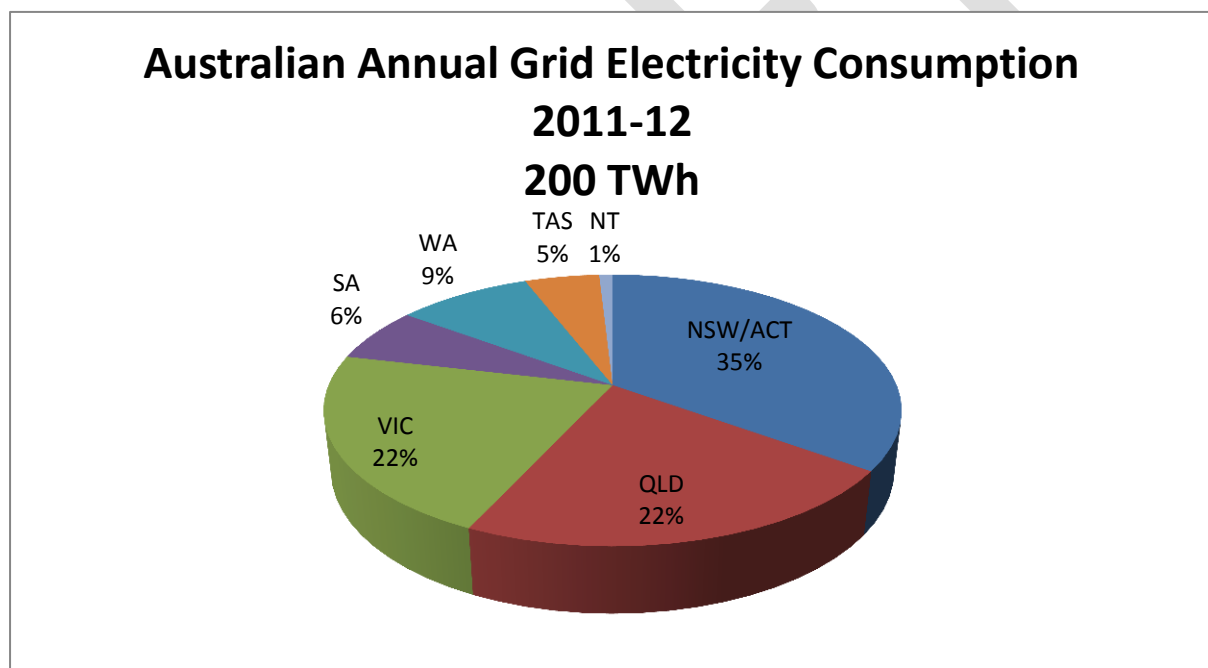


Figure 17: Australian Annual Energy Consumption – Grid Systems¹¹⁹

In addition to the grid consumption, there are many additional generators operated primarily by the mining industry. These add another 55 TWh to the annual consumption volume in Australia, finishing with a total of 255TWh per year.

“In 2010–11, Australia’s principal electricity generation capacity was around 54 gigawatts. Average capacity utilization remained between 48 per cent and 55 per cent over the past five years.”¹²⁰

¹¹⁹ http://www.esaa.com.au/policy/data_and_statistics- energy_in_australia

¹²⁰ <http://www.bree.gov.au/documents/publications/energy-in-aust/bree-energyinaustralia-2013.pdf>

This means that for each hour of the 24 hours of a random day, consumption was between 25.9 and 29.7 GW. At some points during peak usage, that hourly figure could have been as high as 54GW and would have been lower during off-peak hours.

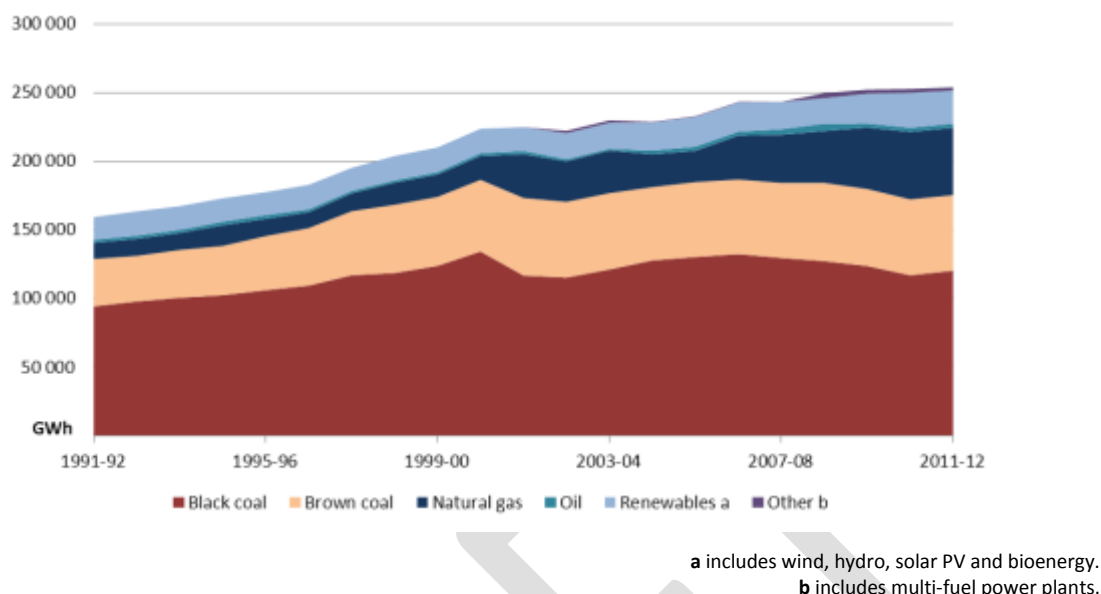


Figure 18: Australian Electricity Generation by energy source

Renewable energy sources made up 9.4% of the total volume in 2011-12. This figure changed by the end of 2013, but no further data was available.

	GWh	growth %		share %
	2011-12	2010-11 to 2011-12	5 year average annual growth	
Fossil fuels				
Black coal	120 302	2.9	-2.3	47.4
Brown coal	55 060	-0.4	-0.2	21.7
Gas	48 892	-0.2	9.8	19.3
Oil	3 070	-0.8	-10.5	1.2
Other a	2 500	-8.0	83.0	1.0
Renewable energy				
Bioenergy	2 343	11.5	-15.1	0.9
Wind	6 113	5.3	19.5	2.4
Hydro	14 083	-16.2	6.8	5.5
Solar PV	1 489	75.1	95.2	0.6
Total	253 851	0.5	1.0	100

Figure 19: Australian Electricity Generation 2011-12 by Energy Source¹²¹

This means that renewable energy sources are on average producing 2.75GW per hour for every hour of every day of the year. To reach the 54GW peak requirement, we would need to add 52GW of renewable generating capacity. The current largest solar thermal plant in the world generates 280MWh electricity for up to 24 hours a day¹²². So if the full burden of electricity generation were to fall on solar thermal, we would need 186 plants. If our energy demands grow over time, we would need to factor in more, but our current grid demands have actually been steady or reducing since 2007 – all growth has come from off-grid production for mining.

¹²¹ <http://www.bree.gov.au/publications/australian-energy-statistics>

¹²² <http://reneweconomy.com.au/2013/solar-storage-plant-gemasolar-sets-36-day-record-247-output-12586>

So if that's the total energy produced today from renewable sources, where are they all? Where are these huge solar arrays, wind farms and power plants? The answer is: All over the country.

3.4.2 Renewable Electricity in Australia Summary 2013

Hydro Power

The best known is the Snowy Mountain Hydroelectric scheme that has been operating for decades. It has since been joined by further large hydro schemes in Tasmania and smaller ones in other states such that there are now over 100 hydroelectric plants in operation.¹²³

Wind Power

By far the strongest growing source of power there are about 10 wind farms that generate over 100 megawatts of electricity, with many more of all sizes under construction.¹²⁴ Current estimates are that total wind power is now over 7,700 GWh per year.

Solar Power

Sunwiz maintain a list of all solar installations over 40kW which is available [here](#). This shows there are many commercial solar installations both completed and underway and they keep getting larger with multiple 1 Megawatt power plants in existence in 2013, including Uterne deployed by community groups near Alice Springs with the assistance of the Northern Territory Power and Water Authority (PAWA). The largest is the Greenough River power station near Geraldton in Western Australia that was commissioned in 2012 and generates 10 megawatts of electricity.

Tidal Power

PAWA has also been heavily involved in trial projects to deploy a tidal power turbine in the Clarence Strait between Bathurst and Melville islands north of Darwin. The company driving the commercialization of this system, Tenax, have recently signed agreements with PAWA and Charles Darwin University to develop a 2MW Pilot Plant and a Research and Tropical Tidal Testing Centre.¹²⁵ This places Australia at the forefront of tidal power development globally and is also the only system designing and testing in the tropics. This creates vast opportunities to extend this technology through Asia after developing the intellectual property and experience in Australia.

Wave Power

There are two utility scale wave generation projects occurring in Australia, the first is in Victoria and the second in Western Australia. The Victorian project is being run by Victorian Wave Partners, an organisation funded by Ocean Power Technologies, Inc and ARENA (the Australian Renewable Energy Agency).¹²⁶ The project announced in January of 2014 that Lockheed Martin had been engaged to manage the build of the equipment used in phase one to generate 2.5MW of electricity.¹²⁷ The final plant, when complete, is expected to generate around 19MW steadily with a peak production of 62.5MW.

The Western Australian project, Bombora Wavepower, is deploying a completely different wave powered solution in which each individual generation unit is expected to provide 1.5MW of electricity. This is roughly the same as a current wind generator; meaning around seven units would be enough to power an average city suburb.

¹²³ <http://www.ga.gov.au/energy/other-renewable-energy-resources/hydro-energy.html>

¹²⁴ http://ramblingsdc.net/Australia/WindPower.html#Major_wind_farms_in_Australia-table

¹²⁵ <http://reneweconomy.com.au/2012/darwin-tidal-energy-plan-gains-momentum-with-new-mou-66835>

¹²⁶ <http://victorianwaveproject.com.au/about-the-project>

¹²⁷ <http://oilprice.com/Energy/Energy-General/Lockheed-Martin-to-Build-Worlds-Largest-Wave-Power-Facility-in-Australia.html>

Geothermal Power

Another company, Geodynamics, completed a successful pilot of a 1 MW geothermal power plant in the Cooper Basin, South Australia in 2013.¹²⁸ It ran for 160 days and proved that the area is viable for continuous production of geothermal power in Australia with the opportunity for significant expansion in size. The Cooper Basin area is integral to the AEMO plan for 100% renewable energy and could be connected to the national grid via a HVDC cable link.

3.4.3 100% Renewable Electricity Future

There have been three major studies undertaken into the feasibility of a 100% renewable electricity future for Australia. All three confirm it is possible, but political willpower is still lacking as the fossil fuel industry lobby maintains a grip on government policy. The three studies were undertaken by a combination of universities and private industry that show a clear pathway for Australia to place itself at the forefront of global change.

1. [Zero Carbon Australia Stationary Energy Plan](#): University of Melbourne - Melbourne Energy Institute (previously Energy Research Institute) and Beyond Zero Emissions (BZE) – Zero Carbon Australia Project.
2. [Simulation modeling of 100% renewable energy](#): University of New South Wales – Centre for Energy and Environment Markets (CEEM) and Institute of Environmental Studies (IES)
3. [100 percent renewables study](#): Australian Energy Market Operator (AEMO)

The AEMO study shows we could make the transition in 17 years, given significant attention and national focus.¹²⁹ The other studies propose faster and slower progression rates and demonstrate that the cost to consumers would not change greatly from current costs – thus escaping the external price rises on fossil fuels. Even if not complete after 17 years, getting past the 90% mark should be enough to escape the energy trap. This means we would need to replace existing generating capacity at a rate of about 3 GWh per annum on average. Spreading this load across solar thermal, photovoltaic, wind energy, tidal and geothermal plants, this change is more likely to happen in bursts as new plants come online. Even if the whole load were placed on solar thermal, this amounts to eleven plants per year. Whilst this would represent a significant engineering investment, it would be less than the current forecast of electricity generation plant projects in Australia.

¹²⁸ <http://www.geodynamics.com.au/Our-Projects/Innamincka-Deeps.aspx>

¹²⁹ <http://www.climatechange.gov.au/reducing-carbon/australian-energy-market-operator/100-cent-renewables-study-modelling-outcomes>

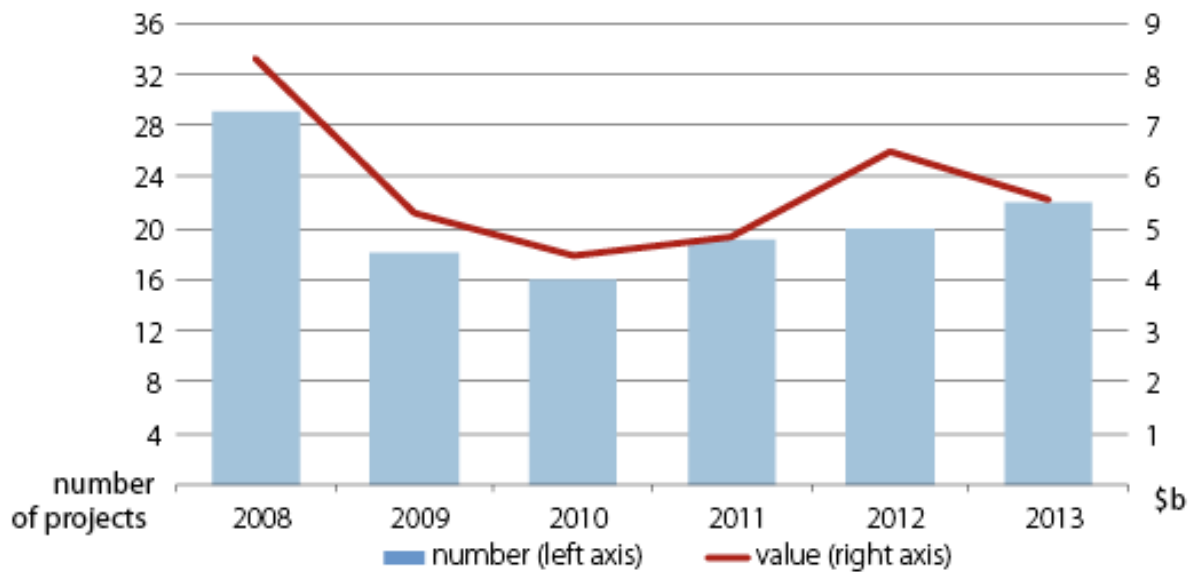


Figure 20: Number and nominal value of electricity generation projects at the Committed Stage¹³⁰

These projects have been adding an average of between 2 and 3 GW of electricity generation per year. Hence, the change to construction of renewable, instead of fossil fuel, power stations would not represent any significant change in the level of activity.

It would, however, signal a change in the engineering skills required to execute the process. These skills would need to be imported at first; then developed extensively through universities both training engineers and researching improvements to electricity generation and storage methods. This would also mean huge employment opportunities for decades as Australia rebuilds its core infrastructure to meet the needs of the changing world. With 1500 construction jobs per Solar Thermal plant and 85 permanent jobs created afterwards, this could also significantly benefit regional Australia in the long term. It would mean almost 16,000 permanent jobs spread around the country to support the 186 plants. That number would change with a greater diversity of power generation plants, but would still represent a significant workforce.

¹³⁰ <http://www.bree.gov.au/publications/megp.html>

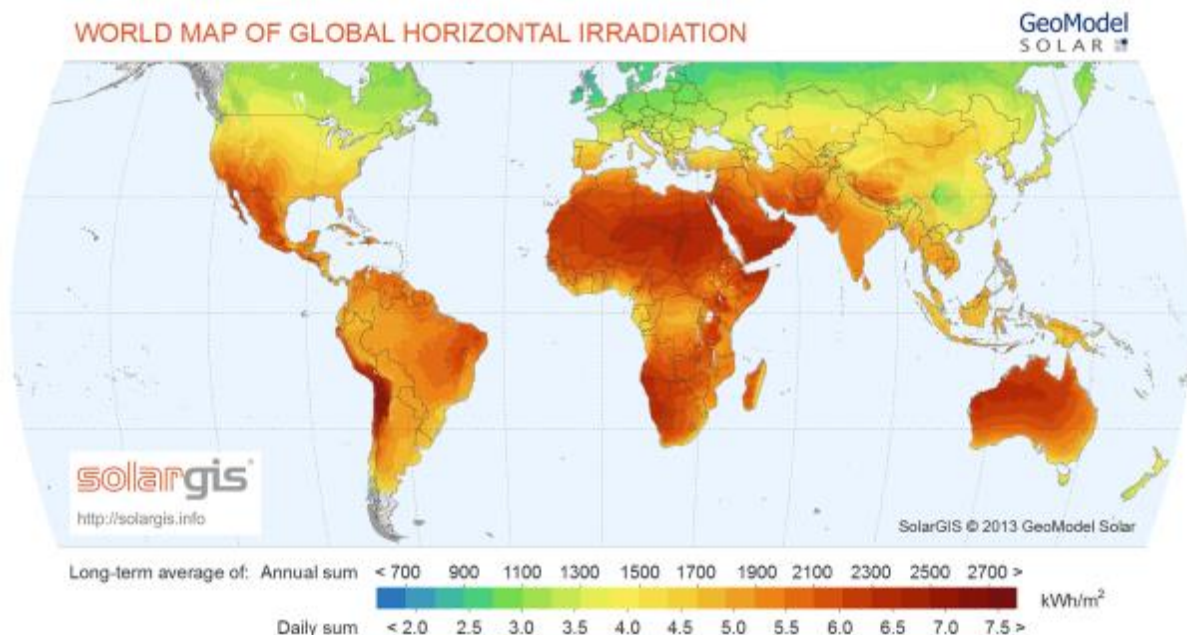


Figure 21: Why Australia Should Be a World Solar Energy Leader

It is important to note that in 2013, Germany almost met Australia's entire demand with solar power alone for a day in May when they set a global record of 22.68GWh of solar power generation to a national grid. This beats the record they set in 2012 by generating 22.2GWh.¹³¹ This is in a country that receives about one third of the raw solar energy that Australia does.

In 2012 in total, Germany generated 92TWh of electricity from renewable sources, almost 20% of that figure was hydro power running 24 hours a day¹³². So to put that into context, Germany is already generating almost half of Australia's current annual consumption from renewable sources and has been doing this for two years already. Australia has no excuse to not be the world leader in the production of renewable energy.

Multiple studies have shown Australia could be approaching 100% renewable energy by 2030 if this was set as the direction in the country¹³³. The only thing lacking is government will to make the necessary change as soon as possible. The fundamental idea in all these proposals is that we will move from a highly centralized power generation model to use multiple means of generation as well as distributed means, such as rooftop solar panels.

¹³¹ <http://reneweconomy.com.au/2013/graph-of-the-day-germanys-new-solar-power-record-52533>

¹³² <http://www.ise.fraunhofer.de/en/downloads-englisch/pdf-files-englisch/news/electricity-production-from-solar-and-wind-in-germany-in-2012.pdf>

¹³³ <http://www.smh.com.au/national/clean-energy-switch-possible-by-2030-at-fossil-fuel-prices-20130823-2sgyc.html>

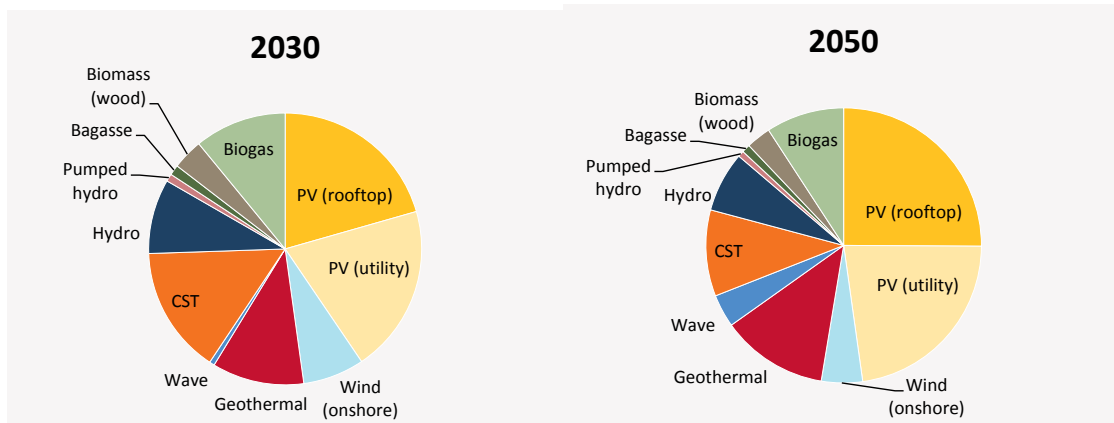


Figure 22: Installed Capacity by Technology, AEMO report Scenario 1 (Faster change and Technology improvement)

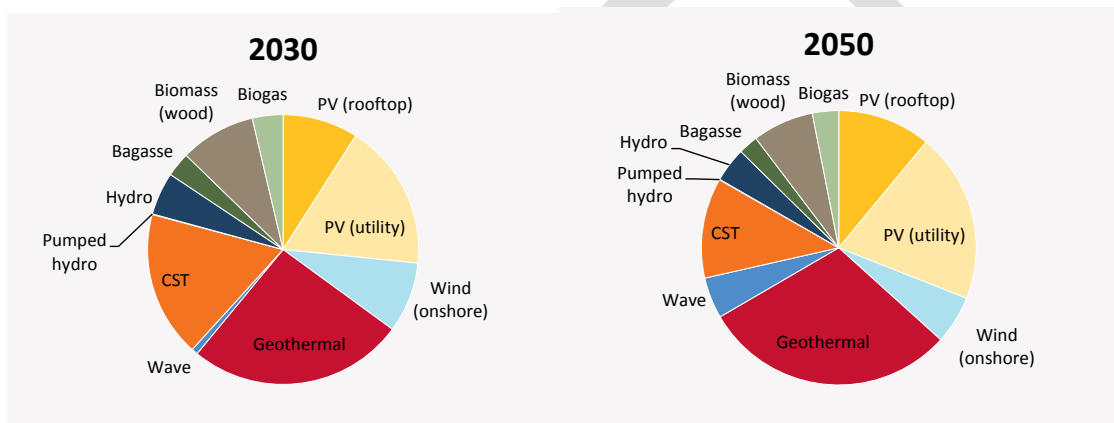


Figure 23: Annual Energy Generation by Technology, AEMO Report Scenario 1 (Faster change and Technology improvement)

This table demonstrates that the overall potential for renewable generation is about 500 times greater than forecast NEM demand in terms of both capacity and energy.

Table 3: Total resource by technology

Resource	Maximum installable generation capacity (GW)	Maximum recoverable electricity (TWh/yr)
Wind – onshore (greater than 35% capacity factor)	880	3100
Wind – offshore (greater than 50% capacity factor)	660	3100
Solar – CST/PV	18,500 / 24,100	41,600 / 71,700
Geothermal (EGS)	5,140	36,040
Geothermal (HSA)	360	2,530
Biomass	16	108
Wave	133	275
Hydro	8	12
Total	25,700 / 31,300	86,800 / 116,900
Current NEM (actual installed capacity and annual generation, all technologies)	50	200

Figure 24: Total Renewable Electricity Generation Capacity in Australia by Energy Source

3.4.4 The Energy Storage Problem

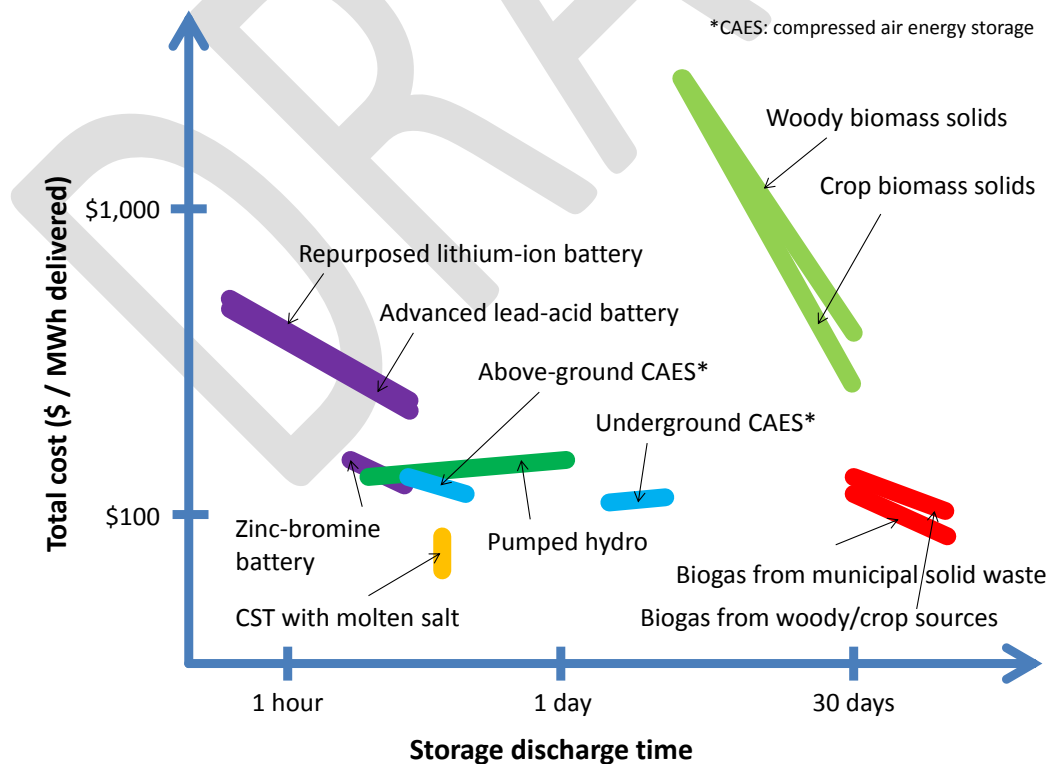


Figure 25: Cost of Energy Storage Options with Discharge Times
- from AEMO report on generation of 100% renewable energy for Australia

The fundamental issue with solar, wind and tidal power is that it does not generate continuously or at predictable levels. Turning intermittent power into constant, baseload, power generation is the ultimate aim of storage solutions. The development of better storage solutions for electricity generated through renewable means remains the single largest area of research. All the other components of the solution are either at parity cost with fossil fuels or will be within the next fifteen years (as demonstrated in the studies). Thankfully this research is well underway with advances being made in the realm of electricity storage at a solid pace. One solution that advanced in 2013 that isn't shown above is flow batteries that use a different technology to all the above solutions and could provide a cheap way to provide megawatt hours of storage.¹³⁴

3.4.5 The Cost of Renewable Energy

In 2013 many forms of renewable generation were at or below the cost of many fossil fuel systems. This was in terms of the costs of building new generation plants,¹³⁵ as well as ongoing operations.¹³⁶ Many countries reached and passed grid parity for onshore wind and photovoltaic solar power generation in 2012/13. The argument that it's too expensive simply doesn't hold anymore. The arguments from both climate change and the energy trap suggest we should be actively speeding up our migration.

The AEMO study puts the capital cost of migration to 100% renewable energy in Australia to be around \$300 billion spread over thirty years. Adding costs of finance, land acquisition, any stranded costs and R&D required, this would likely rise to \$500 billion.¹³⁷

This means an expenditure of around \$17 billion a year is required to complete the transition in thirty years. The Carbon Pricing scheme alone could account for a large percentage of this total. Combined with the removal of fuel subsidies and private investment from generation companies wishing to participate in the move to sustainable energy makes this an entirely achievable goal without requiring new taxes on individuals.

The carbon tax would, however drive many prices up for individuals and this change must be softened over the first decade of its introduction by directly compensating individuals in the places they are most affected. This would primarily be petrol, gas and electricity prices. Rather than placing the full burden on consumers, they should be compensated at point of sale while industry bears the direct burden to force change.

3.4.6 The Failure of the Nuclear Business Case

Risk Liability

The fundamental problem with the nuclear energy argument is not one of engineering or technology. A properly functioning nuclear plant emits no carbon and provides continuous baseload power. These are the two selling points of nuclear as opposed to fossil fuels. The problem is with the business case. Every nuclear power plant that has been constructed in the world today is grossly under insured. Insurance companies only cover minor accidents or issues that have a payout value between around US\$300 million and \$10 billion.¹³⁸ The two major accidents in Chernobyl and

¹³⁴ <http://www.sciencedaily.com/releases/2013/04/130424140603.htm>

¹³⁵ <http://www.eia.gov/forecasts/capitalcost/xls/table2.xls>

¹³⁶ http://www.worldenergy.org/wp-content/uploads/2013/09/WEC_J1143_CostofTECHNOLOGIES_021013_WEB_Final.pdf

¹³⁷ <http://bravenewclimate.com/2013/07/16/new-critique-aemo-100pc-renew/>

¹³⁸ <http://www.world-nuclear.org/info/Safety-and-Security/Safety-of-Plants/Liability-for-Nuclear-Damage/>

Fukushima have and will costs over \$200 billion each over thirty years.¹³⁹ Chernobyl still accounts for around 5% of total government spending for both Belarus and Ukraine.¹⁴⁰ The reason the governments have been left with the bill is that the government is the 'insurer of last resort'. This means that if something goes catastrophically wrong with a nuclear power plant, the investors and operator let the government clean up the mess. The profits from operational years are left untouched. To put this another way, 'Privatise the profits, socialize the losses'.

If this business case were given to private industry, they would laugh it at and choose another path. In fact, that's exactly what they did when the first power plants were being proposed. They refused to bear any of the risk of a major accident, but governments were so set on having the plants that they agreed to this incredible burden. The US government was forced to introduce the Price Anderson Act that limited liability to provide certainty for nuclear business operators. Finland has already imposed unlimited liability on its operators, but this will be of limited use. When it becomes clear the operator has a \$200 billion bill, they will simply fold and try to sell off assets to cover what they can and leave the government with the bill afterwards – which is exactly what TEPCO did after the Fukushima accident. Any argument that modern plants are safer needs to be made to the actuaries for global insurance companies; if they won't back it, then why should we?

Given the proven costs of a major disaster today, it would seem reasonable to expect the nuclear industry to bear the same amount of risk as any other power generating solution. This means all of it. This would mean that the operator would need to be able to cover at least a \$200 billion budget over 30 years and more likely a \$300 billion budget over 50 years. This liability would need to be maintained as a combination of insurance, liquid capital for emergency response and other capital for long term support. The cost this adds to nuclear power operation makes it far and away the least commercially viable solution – with annual costs easily ten times any renewable solution.

Nuclear Plant Cost

Whilst the nuclear industry claims this is a low cost solution, the facts have always told a radically different story; the nuclear industry has never been viable without both insurance backing and massive subsidies from the government.¹⁴¹ The cost for a new plant is now approaching \$10 billion per plant, with a generating capacity between one and two gigawatts per hour.¹⁴² This already puts it in price parity with Solar Thermal with salt storage solution for all plants currently under construction.¹⁴³ It's worth mentioning that all these reactors are considered Generation III+. They are not the Generation IV plants proposed by advocates for increased safety levels and efficiency. The reason those reactors aren't being built yet is that they are largely theoretical and introduce new technology solutions. This means even higher build costs and extended build times that run over a decade. Nor are they implementing thorium reactors; there are no commercial plants in existence today, but some countries are exploring prototypes. These plants have never been economical, will take 40 – 70 years to develop to a deployable potential and are thus already superseded by renewable solutions before they get off the drawing board.¹⁴⁴ The first commercial thorium plant was built and operated in Germany, feeding power to the grid for just over a year after a fifteen year construction period. It was shut down due to technical and financial troubles which saw the operator bailed out by the German government.

¹³⁹ <http://www.greenfacts.org/en/chernobyl/l-3/5-social-economic-impacts.htm>

¹⁴⁰ <http://www.iaea.org/Publications/Booklets/Chernobyl/chernobyl.pdf>

¹⁴¹ http://www.ucsusa.org/assets/documents/nuclear_power/nuclear_subsidies_report.pdf

¹⁴² http://www.ucsusa.org/nuclear_power/nuclear-power-and-our-energy-choices/nuclear-power-costs/

¹⁴³ <http://www.world-nuclear.org/info/Country-Profiles/Countries-T-Z/USA--Nuclear-Power/>

¹⁴⁴ <http://www.independentaustralia.net/environment/environment-display/dont-believe-thorium-nuclear-reactor-hype,4919>

3.4.7 Energy Transmission

How to connect the Australian electricity grid with renewable power generators:

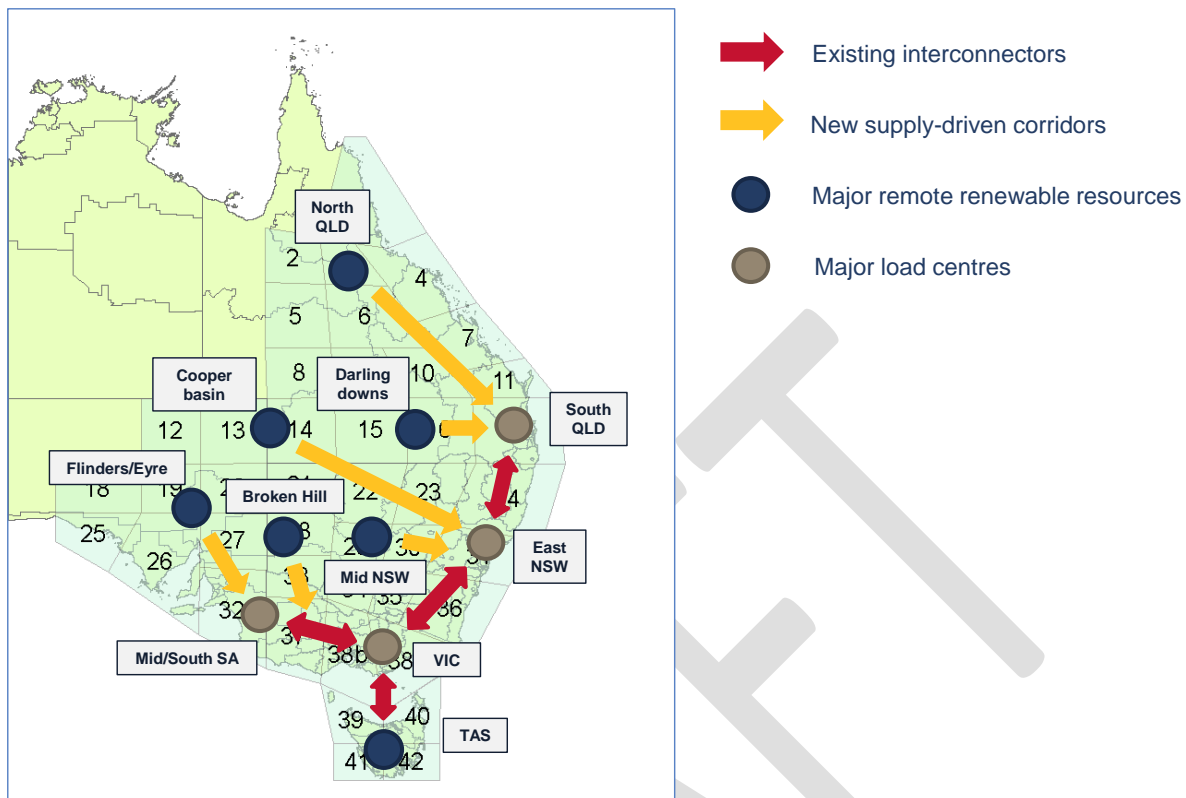


Figure 26: Renewables Grid Connection - from AEMO report on generation of 100% renewable energy for Australia

Australia's size and vast, largely unused, spaces provides both an incredible opportunity as well as a challenge for power transmission. The AEMO study explores this at detail and already recommends the use of High Voltage Direct Current (HVDC) cables for long distance transmission. This technology is already used to transmit power from Tasmania's hydroelectric power plants to Victoria across the Bass Strait.¹⁴⁵ At 290km, the Basslink cable was the longest submarine HVDC cable in the world when it was built and in 2013 is the second longest; The NorNed cable connecting Norway to the Netherlands is 580km long.¹⁴⁶ The Basslink cable also includes a fibre optic link, which shows that a project to transmit power from remote locations could also be used as a communications hub to connect Australia with high speed data links.

Australia has two other long distance HVDC connectors in operation in 2013. The Terranora link that joins the Queensland and New South Wales grids across a 59 kilometre gap¹⁴⁷ and Murraylink that joins the South Australian and Victorian power grid across a gap of 180 kilometres.¹⁴⁸ Murraylink in 2013 is the world's longest underground HVDC cable. So Australia is no stranger to this technology and has been at forefront of deployments globally with two record holding lines. However, other countries have already deployed far longer overland cables, most notably China and Brazil. China currently holds the two longest HVDC cables, each around 2000km and the second built, the Jinping-Sunan line is the highest power transmission line in the world with a 7.2 gigawatt rating (7,200

¹⁴⁵ <http://www.basslink.com.au/cms.aspx?Page=About&Id=13>

¹⁴⁶ <http://new.abb.com/systems/hvdc/references/norned>

¹⁴⁷ <http://new.abb.com/systems/hvdc/references/terradora-interconnector>

¹⁴⁸ <http://new.abb.com/systems/hvdc/references/murraylink>

megawatts). Both of these will be superseded by the Rio Madeira link in Brazil when it is fully commissioned in 2014 at a length of 2,375 kilometres.¹⁴⁹

Having established the length and capacity of HVDC links that have already been constructed, it shows that Australia has every reason to make use of otherwise unusable tracts of the country to generate vast quantities of solar, geothermal and wind power, knowing it can easily transport the energy to the existing National Electricity Market that connects the state grids of South Australia, Victoria, Tasmania, New South Wales and Queensland. The Australian Capital Territory (ACT) is considered a part of the NSW grid. As a result of the large distances and relatively low demand, the Northern Territory and Western Australia each run separate power grids.

However, adding fibre data links to the cable laying process is only just the beginning of the potential to be explored. The construction of high speed rail links connecting Brisbane, Sydney, Melbourne and Adelaide is becoming an increasingly high demand infrastructure project to deal with a post fossil fuel world. Making these new transport links run electric trains provides two opportunities, firstly we gain a high speed transport infrastructure that can shift the demand from air transport and secondly, the project that lays the rail lines could also lay HVDC cables and fibre data cables as well as the power lines needed by the trains. This could provide multiple redundant high speed data and electricity links across the country, as well as powering the new transport entirely from renewable energy sources. The extra power demands of the train system could easily be generated along the length of the track with dedicated generating plants that could also be grid connected as required.

Placing these plants in outback Australia provides another windfall for farmers and landowners. They can earn guaranteed rental income by hosting plants on their land. This has already been established through existing wind farm deals, where the landowner receives AUD\$8,000 a year per turbine.¹⁵⁰ These deals could be modified and expanded to cater for multiple solar thermal plants that could provide guaranteed annual income for farmers; regardless of weather, crops or herd conditions. In a country assaulted by droughts and floods on a regular basis that have driven many farmers to bankruptcy, this could be a lifesaver that also greatly reduces the need for government assistance in hard times. This means farmers can get on with their jobs and government can spend time and money looking at bigger picture projects such as Murray Darling water catchment and the national rollout of renewable energy and transport infrastructure including the new transmission lines.

3.4.8 Australia as Asia's Clean Energy Provider

Having established the viability and usefulness of HVDC cable links to transmit power of very long distances, there is another opportunity for Australia. Connecting firstly to Indonesia and then to other South East Asian countries to provide clean energy generated in the north of Western Australia and Queensland.

We could move from supplying finite raw materials to sustainable raw energy.

¹⁴⁹ <http://new.abb.com/systems/hvdc/references/rio-madeira>

¹⁵⁰ <https://theconversation.com/wind-turbine-syndrome-farm-hosts-tell-very-different-story-18241>

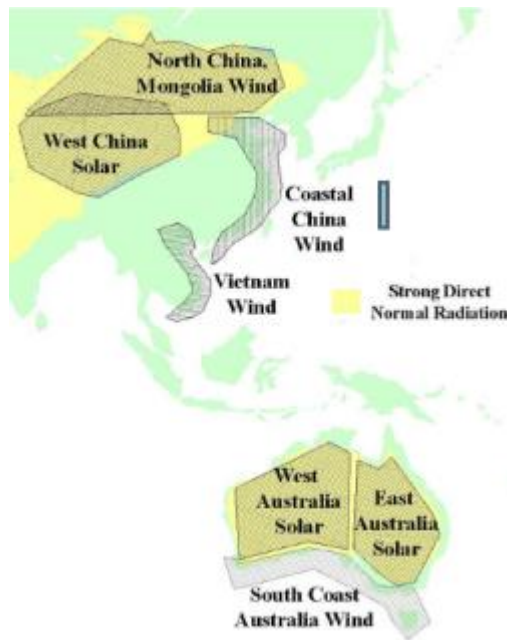


Figure 27: Pan Asia Renewable power analysis¹⁵¹

If that sounds like a wild fantasy, then consider that the idea has already been discussed between Australian and Indonesian universities and politicians¹⁵² and papers have been produced analyzing the viability of such a project.¹⁵³ These papers explore the problems of ocean depth between the countries¹⁵⁴, the expected power loss and the use of hydro stored energy to provide consistent power 24 hours a day. One goes into more depth on establishing a pan-Asia power network that would connect Australia to Northern China and Mongolia, with spurs to other countries.¹⁵⁵

¹⁵¹ <http://grenatec.com/wp-content/uploads/2013/01/Taggart-James-Dong-Russell-2012-transnational-Asian-grid.pdf>

¹⁵² <http://www.ecnt.org/sites/default/files/Participants%20-%20grid%20integration%20&%20RE%20workshop%20Darwin%20July%202013.pdf>

¹⁵³ <http://reneweconomy.com.au/2013/north-australias-electrifying-future-powering-asia-with-renewables-80382>

¹⁵⁴ http://www.hans-josef-fell.de/content/index.php?Itemid=77&gid=743&option=com_docman&task=doc_download

¹⁵⁵ <http://grenatec.com/wp-content/uploads/2013/01/Taggart-James-Dong-Russell-2012-transnational-Asian-grid.pdf>



Figure 28: Pan Asia Network Connections¹⁵⁶

3.4.9 Measures of Progress – Energy Production

The measures of progress for this section are:

1. Percentage of renewable energy production in Australia
 - a. In order to make measurement easier and relevant to the existing electricity grids, this will be separated into three parts;
 - i. **National Grid**¹⁵⁷
(South Australia, Victoria, Tasmania, New South Wales, Australian Capital Territory and Queensland)

¹⁵⁶ <http://grenatec.com/wp-content/uploads/2013/01/Taggart-James-Dong-Russell-2012-transnational-Asian-grid.pdf>

¹⁵⁷ <http://reneweconomy.com.au/2014/power-consumption-falls-as-renewables-make-up-12-of-australia-market-2013>

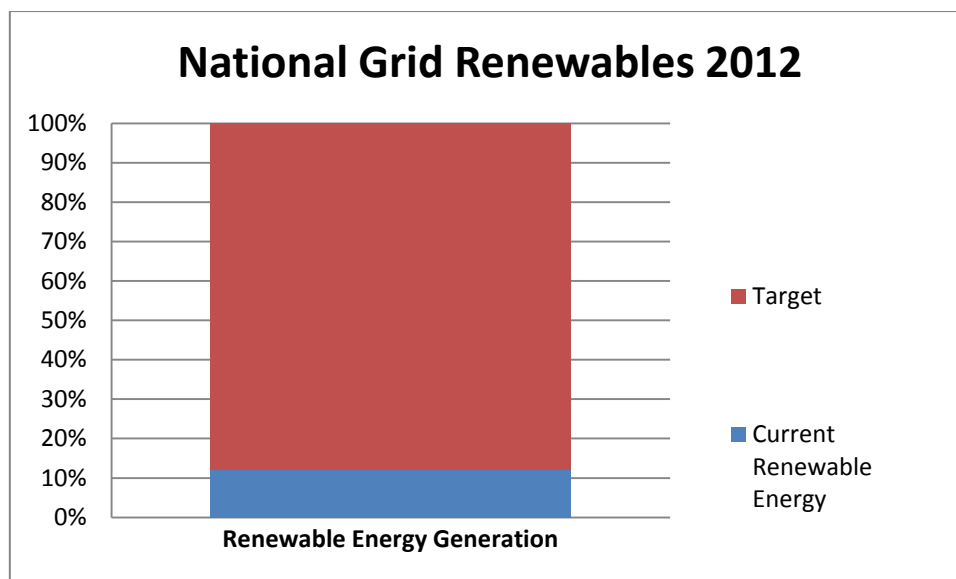


Figure 29: Renewable Energy within National Grid 2012

ii. Northern Territory¹⁵⁸

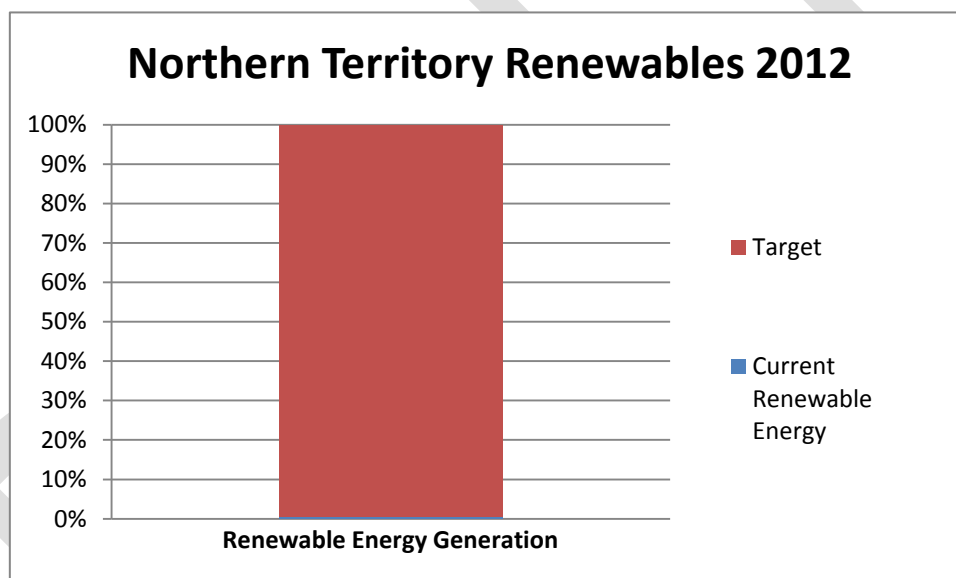


Figure 30: Renewable Energy within Northern Territory Grids

iii. Western Australia¹⁵⁹

¹⁵⁸ http://www.powerwater.com.au/sustainability_and_environment/renewable_energy

¹⁵⁹ <http://www.finance.wa.gov.au/cms/content.aspx?id=15108>

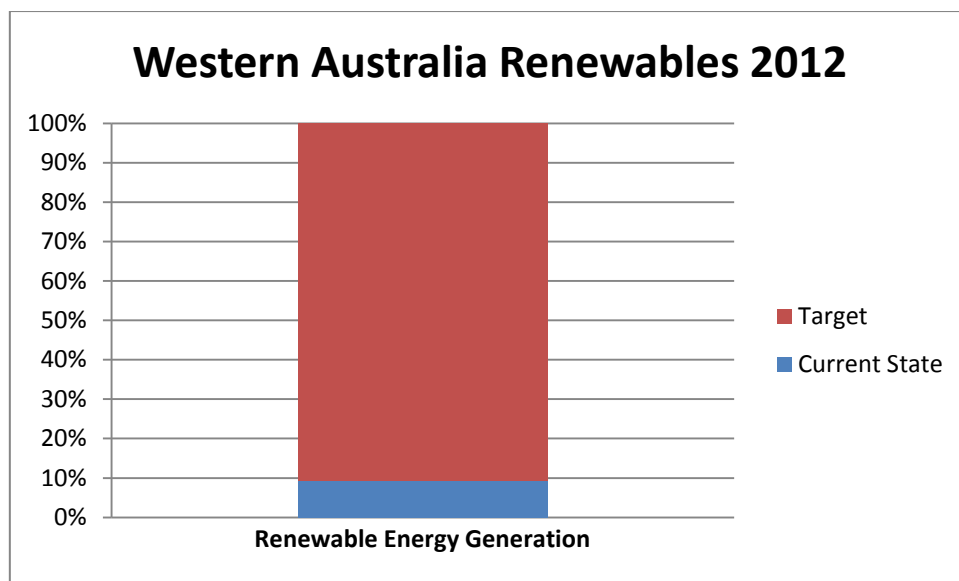


Figure 31: Renewable Energy within Western Australian Grids 2012

3.5 Transport

“Australia’s current land transport system is not sustainable

in economic, environmental or social terms:

- > there has been a shortfall in infrastructure investment in land transport;*
- > congestion costs are high and rising, reducing our economic competitiveness and the liveability of our cities;*
- > road transport greenhouse gas emissions are high and growing quickly;*
- > there is little demonstrable progress on reducing transport-related social exclusion;*
- > the road toll remains unacceptable, with serious injuries rising markedly and fatalities remaining at about 1,450 annually;*
- > obesity is increasing; and,*
- > our energy security is diminishing.” (Moving People - Solutions for a growing Australia)¹⁶⁰*

We need to change our modes of transport from heavily relying on fossil fuel vehicles to move to electric vehicles, public transport systems and cycling. We need to build a high speed electric train network to connect the country and to use cargo lines to replace the trucks. Those electric vehicles must be powered by renewable energy, either from the grid or produced immediately via solar panels.

3.5.1 Personal Vehicles – Bikes

Pedal bikes still offer one of the best modes of transport in a city for many short trips. Fitting exercise into the average city worker’s day can be difficult, but with facilities in most offices to shower after riding to work, bike lanes and active communities across the country; there are many benefits to riding a traditional bike.

Electric bikes have been available for some time in Australia and the supply is already diverse. This ranges from conversion kits¹⁶¹, through light commuters¹⁶² to high performance offroad bikes.¹⁶³ Choice magazine has even recently performed a study of 26 electric bikes.¹⁶⁴ With this variety on offer already, you have little excuse to use a car for trips under ten or twenty kilometres.

3.5.2 Personal Vehicles - Cars

All personal vehicles need to be changed to completely non-fossil fuel powered solutions by 2042 to avoid the energy trap. This gives barely thirty years to change over, which means this must be actively promoted and supported by the government.¹⁶⁵ In 2013, electric vehicles were far less than one percent of the total,¹⁶⁶ a figure that needs to be changed quickly. Electric vehicles are the

¹⁶⁰ http://sydney.edu.au/business/_data/assets/pdf_file/0008/63629/Moving_People_report1.pdf

¹⁶¹ <http://www.electricbicycle.com.au/>

¹⁶² <http://www.solarbike.com.au/>

¹⁶³ <http://www.stealthelectricbikes.com.au/>

¹⁶⁴ <http://www.choice.com.au/reviews-and-tests/transport/bikes/bikes-and-cycling/electric-bicycles-review.aspx>

¹⁶⁵ http://www.esaa.com.au/Library/PageContentFiles/427685f2-f24b-4a43-976c-d07dc3cee426/Sparking_an_Electric_Vehicle_Debate_in_Australia_esaa_Discussion_Paper_November_2013.pdf

¹⁶⁶ http://www.fcii.com.au/library/publication/vfacts_national_report_-_july_2013.pdf

highest growth fuel type, but only because such small numbers are being sold, only around 300 in 2013 – which almost doubled the previous year's total.

Instead of propping up the fossil fuel car industry, any government funding to retain an automotive industry in Australia should be conditional on development of a fleet of electric vehicles for different purposes.¹⁶⁷ We need a city car, a long range car, a ute and a 4WD for the individual market and we need a range of trucks and special purpose vehicles for commercial and industrial uses. 2013 saw a lot of changes on this front, with further development on a drive train from Via Motors that can be used for vehicles from a car up to a light truck – including 4WDs.¹⁶⁸ It also saw new 4WD hybrid vehicles from Mitsubishi¹⁶⁹ and Land Rover.¹⁷⁰ We also saw the release of the final report on a successful Western Australian government trial of electric vehicles¹⁷¹ that recommends heavy investment and encouragement from the government to deploy charging stations between Perth and the Margaret River region.¹⁷² It also saw the mid-term release of a successful Victorian government trial of electric vehicles in Melbourne that also suggests more encouragement for charging stations is required.¹⁷³

2014 is already seeing the introduction of new electric vehicles for the first time, including a new SUV from Toyota¹⁷⁴ and new versions and offerings on many existing electric and hybrid vehicles. There are also numerous suppliers for kits and services all over Australia to convert existing petrol vehicles to use electric engines.¹⁷⁵

The increase of electric vehicles will place a new load on the electricity grid and this must be factored into the growth of renewable energy generating plants Australia wide.

China has invested heavily in kickstarting an electric vehicle market internally, with limited success.¹⁷⁶ The primary problem is extremely price sensitive consumers being asked to pay 150% more for an electric option. Without a trend pushed by government, celebrities and businesses this is unlikely to change soon. Australia does have a far greater environmentally aware population who understand the need for electric cars, but without 100% renewable energy supplies to the grid and an affordable vehicle, this market will find it hard to get started. The specific product that Australia needs to innovate is a fully electric city car that carries a strongly positive image for the masses – in exactly way that Holden and Ford cars did in the 60s and 70s. This will need attention in multiple areas, but an important one is to establish electric vehicles in the racing community.

The racing community has always driven the general popularity of cars as well as being a hotbed of technological innovations. The innovation that wins races one year becomes a feature of production vehicles in years to come. Building an active racing community dedicated to different forms of electric vehicles appropriate for all ages will provide a stepping stone for the population to move more easily into this new paradigm. This means developments for small bikes for kids, that grow

¹⁶⁷ <https://theconversation.com/will-electricity-save-the-car-20617>

¹⁶⁸ <http://www.viamotors.com/powertrain/>

¹⁶⁹ <http://www.autoguide.com/auto-news/2012/03/2013-mitsubishi-outlander-is-worlds-first-4wd-plug-in-hybrid-2012-geneva-motor-show.html>

¹⁷⁰ <http://www.gizmag.com/land-rover-electric-defender-4wd-ev/26464/>

¹⁷¹ <http://therevproject.com/trialreport.pdf>

¹⁷² <https://theconversation.com/trial-complete-electric-vehicles-can-work-in-australia-18843>

¹⁷³ http://www.transport.vic.gov.au/_data/assets/pdf_file/0011/92666/Electric-Vehicle-trial-mid-term-report.pdf

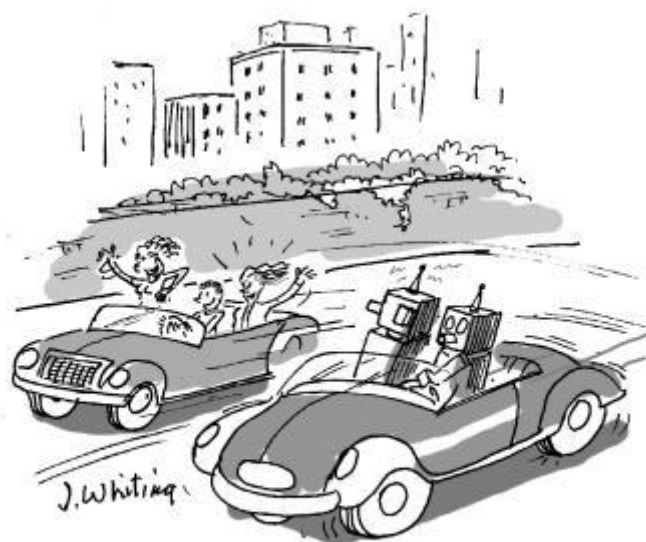
¹⁷⁴ <http://www.toyota.com/rav4ev>

¹⁷⁵ <http://www.aeva.asn.au/>

¹⁷⁶ http://www.mckinsey.com/insights/energy_resources_materials/recharging_chinas_electric-vehicle_aspirations

larger as they grow older; up to powerful on and offroad bikes for adults. Then electric go-karts¹⁷⁷ that grow into smaller racing cars that increase in power as the drivers get older. The kid's products, including go-karts,¹⁷⁸ are all available in Australia today¹⁷⁹ as are bikes up to the adult versions. Cars are still more expensive than their petrol counterparts, up to twice the purchase and typically 150% of the running costs¹⁸⁰; the market demand is for an electric car priced inside 15% of a fossil fuel version.¹⁸¹ There is one startup from Detroit in the US that called in late 2013 for investors to fund the production run of the EcoV Electric vehicle. The retail price will start at US\$12,000, but the catch is this is a low speed vehicle with maximum speed under forty kilometres per hour and a range under seventy kilometres on a single charge. A cynic might suggest it's a golf cart with a car shell, which isn't entirely untrue; but this is another baby step on the right pathway. The transition from fossil fuels will be a long one, but needs to start as soon as possible

There can also be parallel investment and government encouragement in other initiatives for more efficient personal vehicles such as collaborative driving, cars that know where each other are and act as one in traffic to improve throughput. The government could fund further work in all these areas through a carbon tax and later levy on fossil fuel vehicles to drive their operational costs even higher whilst providing assistance for the change.



“They shouldn’t allow humans to drive!”

3.5.3 Commercial Vehicles

2013 also saw the introduction to Australia of electric trucks for sale¹⁸² and with a variety of sizes and uses.¹⁸³ This represents the beginning of a very important change to industry in Australia as we

¹⁷⁷ <http://www.zuma.com.au/solar-racer-350-kids-electric-go-kart/>

¹⁷⁸ http://www.bigw.com.au/sports-leisure/scooters-skates/bpnBIGW_0000000307419/razor-ground-force-drifter-go-kart

¹⁷⁹ <http://www.osetbikes.com.au/new/>

¹⁸⁰ http://www.racq.com.au/_data/assets/pdf_file/0015/129201/Vehicle_Running_Costs_20131.pdf

¹⁸¹ http://www.afr.com/p/electric_cars_fail_to_spark_interest_r9HWW8eieqSWO3rrUU1GK

¹⁸² <http://www.fullyloaded.com.au/news/new-trucks/1305/all-electric-truck-launched-into-australian-market>

¹⁸³ <http://www.smithelectric.com/smith-vehicles/>

completely redesign how goods are transported both within and between cities.¹⁸⁴ The area of trucking needs immense research and innovation to improve energy storage and recharging systems to be able to replace the huge fleet of vehicles that operate today. Savings produced by the move to local and community farming as an adjunct to large commercial farms will take time to realize and possible drive the creation of different vehicle types such as short distance electric assisted bicycles.

3.5.4 Air powered vehicles

Vehicles powered by compressed air have also featured as a fossil fuel alternative since the mid 19th century.¹⁸⁵ As long as the energy used to compress the air in the first place is from a renewable source, this does present another viable alternative. An Australian inventor has already produced a rotary air powered engine and deployed it for various uses such as forklifts and other warehouse based transport as the engine is truly emissions free.¹⁸⁶ This means that continued operation indoors carries no air pollution issues either immediately or with buildup over time. The use of air engines in cars seems to be more limited in terms of range and power than electricity at this time, but a hybrid model was released in 2013 by Citroen that may alleviate the immediate problems.¹⁸⁷

3.5.5 Public Transport – Intra-City

Public transport needs revision within most Australian cities to realize the goal of a fossil fuel free, sustainable future. Enhanced public transport reduces demand for cars on the road and helps to support the change from today's fossil fuel dominance to a new culture of enlightened transport. This need for change is something already recognized by the federal government statutory body; Infrastructure Australia.¹⁸⁸

“Connecting centres and facilities with well targeted, reliable, high frequency, low cost, integrated active and public transport networks can provide greater accessibility options for urban populations. Placing a priority on non-car transportation systems and networks, such as public transport and active transport, is an important step in achieving better productivity, sustainability and liveability objectives.”, Our Cities National Urban Policy Paper 2011¹⁸⁹

They have recommended a substantial investment in providing greatly improved public transport and cycling facilities in every Australian city. This investment includes only maintenance and improvement of road efficiencies in favour of investing in public transport infrastructure to support a sustainable energy future. As noted in the above study, the kind of incremental change that has been applied to public transport infrastructure in the past will not be enough anymore; transformational change is required. This means in practice that our train, tram and bus systems must be extended and upgraded to provide a remarkably improved service. Features of this service would include:

1. Clean and maintained vehicles, stations and facilities across every city.
2. Twenty four hour service on a regular basis that requires no timetable.
 - a. Every x minutes another vehicle will come, the distance between transports can change during the day to accommodate known peaks and troughs.

¹⁸⁴ <http://www.tollgroup.com/media-release/toll-switches-on-australias-first-all-electric-truck>

¹⁸⁵ <http://cleantechnica.com/2013/05/26/compressed-air-cars/>

¹⁸⁶ <http://www.engineair.com.au/>

¹⁸⁷ <http://ens-newswire.com/2013/02/19/hybrid-air-car-debuts-at-geneva-motor-show/>

¹⁸⁸ <http://www.infrastructure.gov.au/infrastructure/pab/urbanpolicy/index.aspx>

¹⁸⁹ http://www.infrastructure.gov.au/infrastructure/pab/files/Our_Cities_National_Urban_Policy_Paper_2011.pdf

- b. The aim is to over service and provide a less crowded experience
3. Easy connections between transport modes.
 - a. Closer conjunction of train, tram and bus stops. Could be tunnels or overpasses from stations to tramways and bus stops.
4. Personal Safety on every journey.
 - a. Staff presence at train stations.
 - b. Roaming conductors on trams and buses who also serve to assist passengers.
5. Cater for different train commuters and purposes;
 - a. Bicycle carriages on trains. A technical evaluation has already been carried out in Victoria, this should be extended around the country to all services.¹⁹⁰ European countries such as Holland have already implemented very successful programs.
 - b. Business commuters who need more space and a small table to work on longer journeys
 - c. Quiet carriages. These are already being implemented in NSW and Victoria.
6. Add another mode of transport – fixed route electric shuttle buses
 - a. In many cities shuttle buses run along set routes that pickup and drop off people wherever they want. Across Russia and the ex-soviet countries, they are called marshrutka,¹⁹¹ in Indonesia they are called Angkot (ANGkutan KOTa or ‘city transportation’)¹⁹² and they exist in different forms across many countries. In China they have many form factors and are often used as transport around large university campuses and at tourist locations.
 - b. They follow a fixed route, often in a loop and including other public transport stations to provide an easy connection.
 - i. An enhanced option would be to run a scheduled service with door to door service for people with mobility problems. The shuttle bus would pick up multiple people from a location in the service area and transport them to the desired destination; home, shopping centre, etc.
 - c. Each passenger pays a set fee to the driver, often paid as you exit the vehicle.
 - d. This simple form of transport fills the gaps between taxis, buses and walking. Where most people do not want to pay a full taxi fare for short trip, buses often do not get close enough to their houses and it may be too far to walk with shopping or a bag.
 - e. This would provide a large number of low skilled jobs for many people across every city.
 - f. This would mean less need for personal vehicles in many areas.
 - g. This service has operated successfully since the late 70s in eastern Melbourne under the name ‘Telebus’. It offers both fixed route services with marked stops and door

¹⁹⁰ http://www.austroads.com.au/abc/images/pdf/vdt_web_1.pdf

¹⁹¹ <http://www.st-petersburg-essentialguide.com/marshrutka.html>

¹⁹² <http://travenesia.com/angkot-indonesian-public-transportation/>

to door services for an additional charge. It is integrated with the city's 'Myki' transport payment card system.¹⁹³

3.5.6 Public Transport - Long Distance

Electric trains must replace long distance trucks. We should use the current tracks for constant low speed electric freight trains and build new high speed electric transport for both people and rapid freight. The government has already completed two phases of the study into building high speed rail infrastructure to connect Brisbane, Sydney, Canberra, Melbourne and Adelaide with various regional centres.¹⁹⁴ This estimates the cost of the total network at over AUD\$110 billion and suggests it will take decades to execute. This kind of national infrastructure project is exactly what Australia needs to keep our population employed. Some further consideration should be made into possible savings in laying HVDC cables between remote renewable power generators, such as in Coopers Basin, and cities by performing the work at the same time. High speed rail would consume significant amounts of electricity, but this could easily be supplied by remotely placed renewable energy generators built for the purpose; or factored into the construction of the plants required to power our cities.

This would provide a fossil fuel free transport network for the majority of the country's population. Some further consideration should be made on connecting Perth and Darwin to this system over time in order to make better use of these ports that are significantly closer to most of Asia.

3.5.7 Shipping

Electric powered submarines that can remain submerged running on batteries for a couple of days have been around for a long time. Recent advances with fuel cell technology produced a German built submarine that can remain submerged and operational for three weeks.¹⁹⁵ However both of these vessels are really Diesel-Electric powered, as has become normal in many applications. Electric motors are incredibly efficient and produce higher, more variable torque than any other kind of engine. The problem to make these a renewable energy proposition is to provide stored energy in enough volume to power lengthy journeys across oceans.

There are solutions such as the Azipod that deploy electric motors outside the ship's hull, that can reduce overall fuel costs through efficiencies – but they still need the diesel engines providing the electricity.¹⁹⁶

Another commercially available technology to reduce fossil fuel consumption is the addition of a large kite to cargo ships to reduce fuel consumption on long journeys.¹⁹⁷ There are a few vendors for this kind of product that appear to be operational, but this hasn't become a mainstream solution. Development of the idea of using wind power to move ships again is diverse and large new container ships are being built now that will source the majority of their power from the wind.¹⁹⁸

As in many areas, the final solutions need to evolve over time and will likely involve many hybrid systems to meet the demand for lower cost transportation as fossil fuel prices inevitably double and triple in the next 25 years.

¹⁹³ <http://www.thinkingtransport.org.au/library/2010/01/telebus-demand-responsive-bus-system>

¹⁹⁴ http://www.infrastructure.gov.au/rail/trains/high_speed/index.aspx

¹⁹⁵ http://www.militaryfactory.com/ships/detail.asp?ship_id=Type-212A

¹⁹⁶ <http://www.abbaustralia.com.au/industries/db0003db002805/c12571f4002ab83dc1256fdf003b2929.aspx?productLanguage=us&country=AU>

¹⁹⁷ <http://www.skysails.info/english/skysails-marine/skysails-propulsion-for-cargo-ships/>

¹⁹⁸ <http://science.time.com/2013/08/07/video-set-sail-for-greener-maritime-cargo-shipping/>

3.5.8 Measures of Progress – Transport

The measures of progress for this section are:

1. Percentage of Electric Cars of total sold per annum

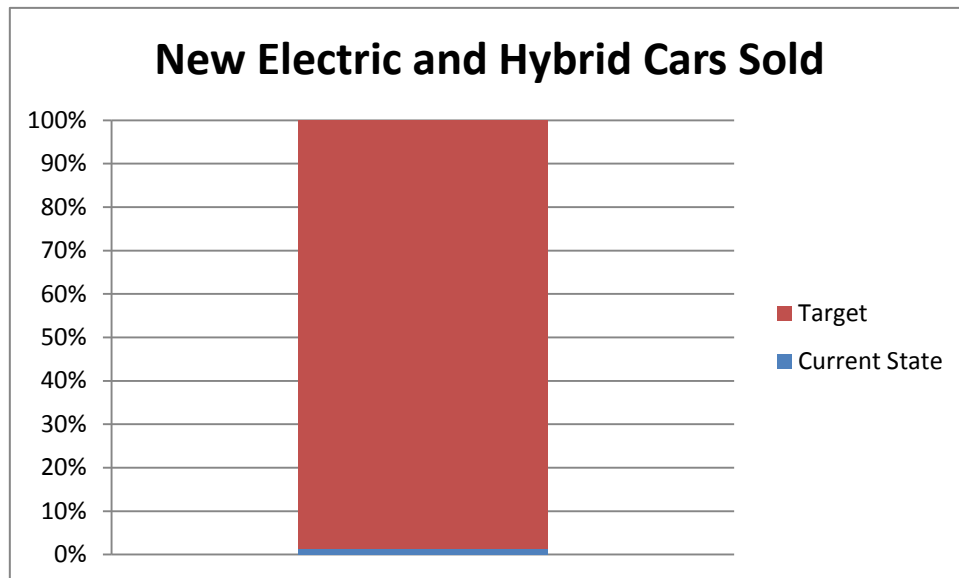


Figure 32: New Electric and Hybrid Cars Sold

2. Percentage of Electric Cars registered of total in Australia

- This statistic is not currently being collected by any agency. The national Motor Vehicle Census available from the Bureau of statistics puts LPG, Dual Fuel, Electric and Hybrid vehicles into one group.
- The total number is likely to be under 30,000 vehicles nationally at the start of 2013

3. Percentage of Electric Commercial Vehicles of total sold per annum

- This statistic is not currently being collected by any agency.
- Electric trucks were introduced into Australia in September of 2013, Toll Group introduced one in its Brisbane fleet.¹⁹⁹ This means the total sold in 2013 is likely to be this one.

4. Percentage of Electric Commercial Vehicles registered of total in Australia

- This statistic is not currently being collected by any agency.
- Considering there is only one confirmable electric truck operating in Australia in 2013, the percentage is extremely low.

5. Milestones progress towards a complete no-timetetable city train system in each city that has an existing one.

(No progress to report in 2013)

- Design and Schedule for Deployment (per city)
- Preparation including any corridor reservations and acquisitions (per city)
- Work Starts (per city)

¹⁹⁹ <http://www.tollgroup.com/media-release/toll-switches-on-australias-first-all-electric-truck>

- d. First commercial operation (per city)
- 6. **Milestones progress towards Electric high speed rail system**
(No progress to report in 2013)
 - a. Design and Schedule for Deployment
 - b. Preparation including corridor reservations and acquisitions
 - c. Work Starts
 - d. First line completed
 - e. First commercial train

3.6 Food Security and Sovereignty

3.6.1 The People Come First

These definitions are important to establish these two principles as being superior to the profit motive that drives corporations. In the event of a conflict between these principles and corporate interests, these principles must be upheld in all cases. Corporations acting to deny these principles must be punished severely for each transgression, in a progressively accelerating way such that multiple transgressions will destroy the company.

3.6.2 Local Production

The best answer to this problem lies in far greater local, organic production of food, both at country farms and within homes, apartments and community gardens in the cities.²⁰⁰ This would also dramatically reduce the energy being used for food distribution; as the majority of people would be within walking distance of the farm used to produce their food.²⁰¹ A new global business in distribution of nutrients, vertical farming and associated materials would need to be established to support this change. Once this system of local food production was established, the current corporate dominated market would lose all demand and relevance; so we can expect fierce resistance from this quarter as the idea takes hold.²⁰²

²⁰⁰ <http://monthlyreview.org/2013/03/01/cuban-urban-agriculture-as-a-strategy-for-food-sovereignty>

²⁰¹ <http://www.epa.vic.gov.au/ecologicalfootprint/calculators/personal/docs/EF-tips-food.pdf>

²⁰² <http://www.corporatewatch.org/?lid=3713>



Figure 33: Food Sourcing Pyramid

The food sourcing pyramid shows the practical changes to make to the way you approach the question of food.²⁰³ Changing to purchasing directly from farmers or even growing your own does not have to happen overnight. You can spend time changing one kind of food at a time and then letting that become habit before changing the next. For example, source fruit and vegetables from an organic food delivery service and then get used to the new variety of seasonal produce this will introduce you to. Next consider returning to butchers for meat, local bakers for bread and sustainable shops for household cleaners, biodegradable corn plastic bags and fair trade produce. The change does not need to be a shock all at once; as you swap out each source, you are likely to discover personal benefits you hadn't realized existed. This might include cooking new and varied recipes by being more aware of the produce and meat you're purchasing or simply enjoying the lack of lengthy supermarket queues in your weekly life.

3.6.3 Reinventing Australian Gardens

Food gardens have a long and varied, history in Australia; made diverse by the myriad of people from around the world arriving over time and bringing their food cultures with them. From the market gardens of the gold rush era Chinese immigrants to the backyard tomato and vegetable farms of European families arriving after World War 2, Australia has hosted an incredible variety of styles, sizes and approaches to the food garden. The last few decades, however have seen a move to an urban culture increasingly separated from food production that has seen a strong counter-culture emerge to bring food gardens back into daily life. With the global food production market dominated by multinational corporations, the act of growing your own becomes a daily protest action for change.

The Permaculture movement began in Australia in 1978 and spread worldwide over time to great effect. The focus of permaculture is to create a 'permanent agriculture' that involves interacting systems to create a sustainable food garden.

²⁰³ <http://www.sustainabletable.org.au/Hungryforinfo/What-you-can-do/tabid/121/Default.aspx>

The central principles are neatly summarized thus:

- Care for the earth: Provision for all life systems to continue and multiply. This is the first principle, because without a healthy earth, humans cannot flourish.
- Care for the people: Provision for people to access those resources necessary for their existence.
- Return of surplus: Reinvesting surpluses back into the system to provide for the first two ethics. This includes returning waste back into the system to recycle into usefulness.

These principles form a great foundation for any sustainable system, anywhere in the world.²⁰⁴ In designing a garden these principles and the global community of people dedicated to helping each other, form a working practice to help everyone to ensure their own food security. An example of an idea supported by Permaculture is Aquaponics. This is the creation of a system whereby fish and plants grow and thrive together, providing for each other in a permanent cycle that also allows us to have a source of fresh fish and produce at the same time.²⁰⁵ This is just one such community working today in Australia, another large movement involves community gardens.

Reclaiming unused space around public housing, disused land and creating new roof and vertical gardens are all features of community gardening.²⁰⁶ This is a healthy and growing group across Australia that is seeking to bring people back together in local communities to grow food and share the experience together. These might be city farms, public housing organizations or even long term collectives. Some community gardens do follow permaculture principles and others allow families without their own backyards to grow their own produce. The effect of both Permaculture and community gardens is to provide a huge support network for people who are interested in reclaiming food production for themselves – whether or not you own the land required.²⁰⁷

For those looking within their own properties, vertical gardens and roof gardens provide an efficient way to grow produce in limited space as well as improving the look and feel of any building.²⁰⁸ They also provide great benefits when used to shade the external walls or roof of your home as they act as an extra layer of insulation and cool the area as water evaporates.²⁰⁹ Both kinds of gardens can be used as a herb and spice garden at home and then extend to seasonal vegetables as space allows.²¹⁰

These are all active strategies to begin to reduce the current Australian dependence on commercial farming to ensure a better future for our grandchildren.

3.7 Water Security

3.7.1 The People Come First

- Water is a human right.

²⁰⁴ <http://permacultureprinciples.com/principles/>

²⁰⁵ <http://aquaponics.net.au/>

²⁰⁶ <http://communitygarden.org.au/>

²⁰⁷

http://www.actpla.act.gov.au/tools_resources/research_based_planning_for_a_better_city/demand_for_community_gardens_and_their_benefits?SQ_DESIGN_NAME=printer_friendly

²⁰⁸ <http://www.heraldsun.com.au/business/vertical-gardens-are-on-the-way-up-among-inner-city-green-thumbs/story-fn7j19iv-1226239029490>

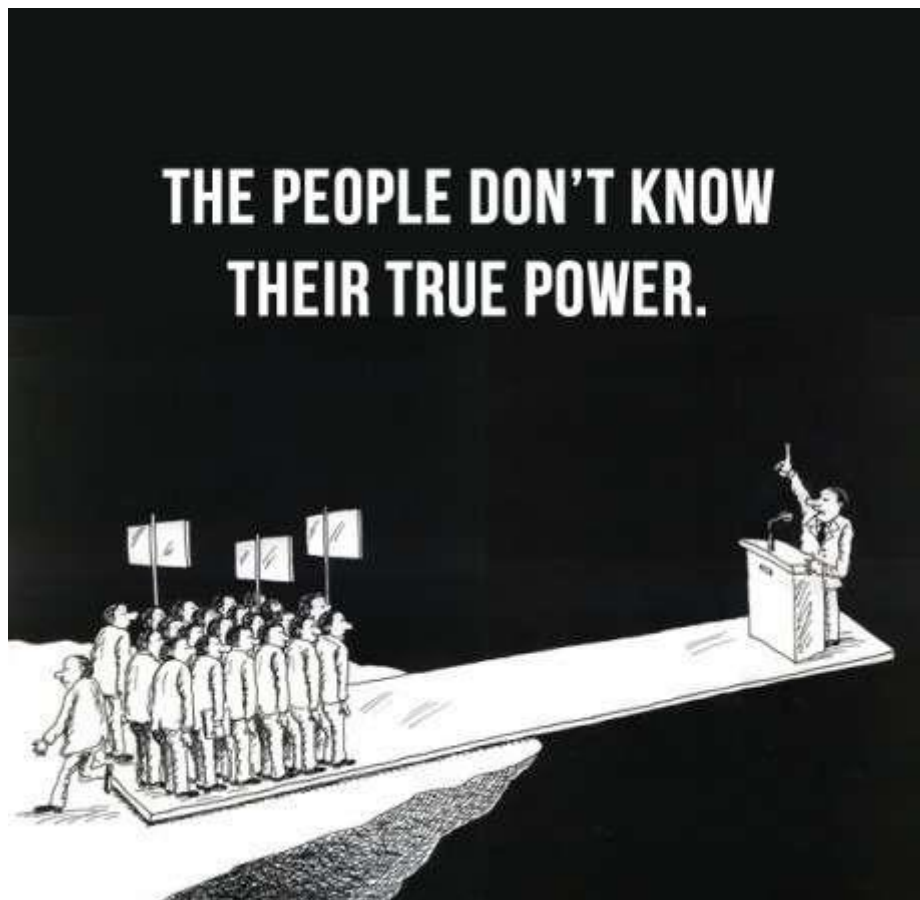
²⁰⁹ <http://www.globalchange.com/roof-gardens-impact-on-energy-saving.htm>

²¹⁰ <http://imap.vic.gov.au/uploads/Growing%20Green%20Guide/Growing%20Green%20Guide%20FINAL%20DRAFT%20website4.pdf>

- The supply of clean drinking water should be provided only by governments with a doctrine of making it available charging at most the cost of transport.
 - Any water sales by private companies should be strictly regulated to follow the same legal principles.
- Profiting from supplying clean water should be a criminal offence.
- Water bottled in plastic containers should be banned outright
 - Australia needs an education campaign to prevent the vast amounts of money wasted on bottled water when Australia's water supply is actually one of the cleanest and best in the world.

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3.8 Government



3.8.1 Active citizens make politicians work for them

*“Toute nation a le gouvernement qu'elle merite.
Every country has the government it deserves.”*

(Josephe de Maistre , Lettres et Opuscles Inedites (1851) vol.1, letter 53 (15 August 1811)

There needs to be a large educational change to create a new generation of Australians who are taught about the operation of government from an early age, with that understanding increased over time with practical applications. A graduate from the education system should know exactly how to engage with government institutions at every level to achieve the results they require. This would in turn create a new culture of activism that would create new political organizations and motivations to build the diversity of opinion a healthy democracy needs to function. This process would drive us away from a two party system to a multi-party democracy where the final outcome is likely to far more balanced and actually work for the benefit of the people.

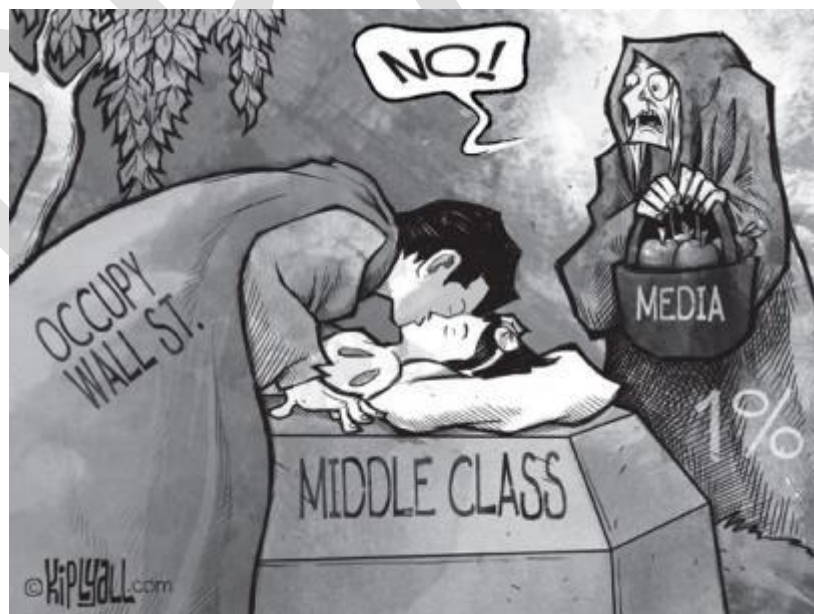
This education, however, needs to start with the current population who never received this knowledge and experience at school and need to be brought up to speed to bring our political parties into line.

3.8.2 Change media ownership and news services laws

An informed electorate seems to be something the old parties actively fear. Citizens of this type might actually start taking an interest in what they do and force better behavior by more actively punishing politicians who deliberately mislead them. This isn't going to happen overnight and will take a changed education system and a lot of activists to bring to fruition over a generation. In order

to give this future a fighting chance we need to reconsider the media's responsibility to the people. This means some legislation to bring about these changes:

- Restrict media ownership by any individual or corporate interest in Australia to no more than 40% of the total in that form of media (eg, newspapers, magazines, radio, TV).
 - One of the aims of this is to break up the national syndicated media system to favour more local and diverse content production. The internet is already changing this balance; this needs to be accelerated.
- Enforcement of 50% content to be 100% Australian produced on all media.
 - Recycling cheap services from other countries, but primarily the US, is destroying these industries and communities in Australia. We need to help the local music, TV and film industry to produce more.
- Any commercial news service with an audience consistently over 100,000 people must be subject to two new requirements:
 - Any news broadcast must represent journalistic integrity providing a balanced view of the facts as they are known.²¹¹
 - Punishments for failures on this front must be severe and escalate with each successive offence to provide reasonable deterrent.
 - Any mistake or error that becomes known to a news provider must be published with the same level of prominence as the original story.
 - If it was a front page headline, the retraction must also be the same
 - If it was a leading news bulletin item featured in daily trailers, the retraction must be the same.
 - Punishments for failures on this front must be severe and escalate with each successive offence to provide a reasonable deterrent.



²¹¹ <http://www.spi.org/ethicscode.asp>

3.8.3 Change the political game from schoolyard fights to visionary leadership

To manage the changes described in this document, we need transformational leaders, not transactional administrators. The world is not good the way it is and we need massive change now. Demanding the changes we need is the beginning of changing the politicians we will support. Holding them to account for their statements and actions should be a matter of personal pride for every Australian. Ignoring their attempts at distraction to keep them focused on the real policies that the nation demands will drive the kind of leaders we need. The purely power hungry will need to change their ambitions to suit the nation, or be soundly dumped and left on the sidelines.

3.8.4 Multi-Party Politics: Make politicians work for your vote.

Australia only has four parties involved in government and opposition who individually attracted more than 8% of the primary vote.²¹² The Clive Palmer party with just 5.5% of the primary vote beat the long term National party by over a percent and after that we have a number of parties and independents with 1% or less. The fact that Clive Palmer was able to gain so much support in just one election, with a party that only existed for five months prior to the election is representative of the amount of dissatisfaction country voters feel with the Liberal led coalition.

We need to break up the two old parties to move towards more parties that represent a more diverse range of Australian opinion. An ideal distribution would be about eight parties with 10-15% of the primary vote, with the remainder independent and fringe groups. If more Australians saw the political system in this way, we would see a greater diversity in voting patterns and support for more parties - looking at Australia this way makes the future look much better. We need to break the illusion of the two party system, which the population has almost managed without external assistance and make Australians see we are different to the US and UK populations that continue to support neoliberal regimes.

This level of diversity will force parties to work harder for a vote. This will force the argument to be about policy instead of random distractions and slogans. This will keep them so busy keeping us happy that the corporatocracy is forced out for lack of interest. They would have to bribe large swathes of the population to get their way instead of simply appealing to the selfish greed of the current politicians.

3.8.1 A new approach for Democracy

As a longer term goal, we need to question and modify many assumptions about the mechanics of our democracy. Reconsidering the division of powers and funding between the three levels of Australian government (local, state and federal) should be foremost amongst these. With the advent of advanced electronic communication systems, it should be easier to move back to a more direct democracy whereby:

- Individuals could choose to vote on issues in parliament for themselves or nominate a representative for them. This wouldn't even have to be one representative, you could nominate the politician or party who best represents your views on any issue or type of issue
 - You could, for instance nominate Labor support on education, Green support on the environment and Clive Palmer support for farming.
 - This would further act to break down the party allegiance for the most active citizens, who could instead split their preferences as they go – with the ability to change them online as required.

²¹² <http://www.abc.net.au/news/federal-election-2013/results/party-totals/>

The fundamental problem with such a system is the question of IT security for people to engage in secret ballot functions that require no connection between a specific person and the way they voted. This could be achieved using a smart card system whereby a card is issued to anybody who has the right to vote, then used in a polling system to interact electronically to cast a vote; each card can only be used once per election. Then a completely separate system tracks that each person only votes one time. Any completely online electoral system would attract a lot of attention from people wanting to subvert the process, so a slow migration using the current process as a starting point is warranted.

Another approach to consider is the current Swiss system of 'direct democracy' whereby they vote directly on issues at all three levels of government multiple times a year. Instead of trusting entirely to representative democracy, this ensures that political outcomes really are the will of the people. This approach makes the government a far less attractive target for corporate attention as the people can easily overrule an unwelcome decision. Issues can be raised by the government or by the people if they produce a petition signed by more than one hundred thousand citizens within a period of 18 months.²¹³

Both of these new approaches could also make votes on regional issues carry far more weight if we redesign the scope of states to focus on areas of common interest. For instance, everybody who makes use of the Murray-Darling river system for farming and water supply generally has a common interest that crosses many current states. This could be turned into a different kind of electorate such that the people with the common interest and understanding can work together directly to achieve results; rather than waste time fighting across party political and state lines. These regions of common interest could also be diverse, for instance mining leases held across the country could become an area of common interest for anybody to join, comment and vote on.

This is intended to be the start of a greater discussion on the topic of direct vs representative democracy and how to achieve a balance to give the people a greater say in the nation's future instead of trusting it to greedy politicians with a view to short term personal profits at any expense.

²¹³ http://www.swissinfo.ch/eng/politics/The_people_decide.html?cid=371870

3.8.2 Sustainable Zero Net Growth Economy



The global economy needs to reach a Zero Net Growth equilibrium point.

The primary reason for this is to recognize that we live on a finite planet with finite resources. Infinite cumulative growth can only consume all our resource in a one way ride to oblivion. Albert Bartlett explains this very clearly in this linked video.²¹⁴

The other reason we need this change is to provide the right environment for markets to constantly innovate and regenerate over time without destroying the finite resources of the world. The current domination of huge multinational corporations that are allowed to operate in every industry on the planet is not providing that environment. The lie of infinite growth must be taught from primary school, showing how quickly exponential growth consumes all resources.

"Growth for the sake of growth is the ideology of the cancer cell." – Edward Abbey²¹⁵

There must still be reward for private investment, but that investment model should be more like crowdsourcing – everyone can join in on supporting small, local business or larger ventures as required. This means that the evolution of the market is determined far more by the masses than by selfish, rich individuals and corporations manufacturing consent.

Further investigation into alternative approaches to the current debt economy must be made rapidly and implemented in stages. The systemic change will need to be spread over at least two decades

²¹⁴ <https://www.youtube.com/watch?v=F-QA2rkpBSY>

²¹⁵ The Journey Home : Some Words in Defense of the American West (1977), "The Second Rape of the West", p. 183

to allow the shift to occur without major repercussions in the short term. The gift economy,²¹⁶ positive money²¹⁷ and a return to local, multilayered economies with different currencies²¹⁸ must all be considered.

The option to do nothing has expired, change is necessary, but we must determine the pathway carefully and let our government make the decisions with the nation in mind; not financial institutions or corporations.

As a final note: Any economic theory that does not directly include consideration for global environmental and social impact in its modelling is to be discarded. The archaic theories that don't include these components need to be treated with the same disdain we now give flat earth theory and a geocentric solar system. It is unmitigated nonsense worthy only of derision and exclusion from any serious conversation.

3.8.3 Reconsider Infrastructure Monopolies

In industries with little or no competition in Australia, they should be government owned to varying degrees. The concept of a 'natural monopoly' is well known to economists and the subject of ongoing debate. There are multiple versions of how these might come about, but the most relevant to Australia is the lack of competition in many areas combined with a small population spread across a large geographical space. This affects all utility service providers in much the same way; for most connections between producer and consumer, it would be incredibly expensive to duplicate the infrastructure. The issue is not competition between actual producers or service providers, but between large scale, expensive pipes and cables that connect them to the consumer. The important aspect is that producers and retailers should not be fighting for access to the connecting network, they should be fighting to produce more efficiently or construct attractive retail services for consumers. In order to achieve this, the organization running the connecting network cannot be allowed to also compete in the generation or retail markets. That component of the system would be far better managed by the government directly and regulated tightly to ensure all generators and retailers have equal access and charges to make use of the network. Those charges should cover the maintenance and improvement of the network over time.

The danger with establishing any kind of monopoly service provider is the lack of competition leading to little or no innovation or evolution in the quality or efficiency of service. The avenue for change here should be through the network of small to medium businesses providing specific materials, equipment and sub-contracted services. The final step is establishing service level requirements on the overall services provided by the network organization that are adhered to and enforced stringently. These service levels must include continuous service improvement components that are subject to regular review. The time period of review depends on the industry involved; an annual review should be the default, but for some a five year or longer review may be appropriate.

The second requirement on all utility organisations is a strong move to decentralization of production or processing. This should come from revisions to the building code to require a percentage of every building's water, electricity and sewerage services be handled within the building. All new residential buildings should be required to produce or process 100% of their average needs within ten years, all old buildings should be retrofitted within forty years. None of the technologies required are new and this would create a strong demand across Australia for new

²¹⁶ <http://sacred-economics.com/>

²¹⁷ <https://www.positivemoney.org/>

²¹⁸ <http://www.forbes.com/sites/kellyphillips/2013/07/23/funny-money-or-new-economy-alternative-currency-raises-tax-other-challenges/>

companies providing this equipment and services. These should be encouraged as multiple startups to ensure competition in the industry of making buildings self-sufficient.

3.8.3.1 Telecommunications & Internet

Competition between a small number of telco service providers has not resulted in any significant benefits for consumers. The fundamental problem is the division between running the core infrastructure of cables, exchanges and mobile towers as opposed to the equipment at either end of the cable and within the mobile towers. The NBN project already recognizes this problem and seeks to establish a separate company as the owner and service provider for the underlying physical network. That responsibility needs to be extended later to cover wireless data transmission for mobile phones and other devices.

Traditional telecommunications solutions are now being retired in favour of standard high speed internet connections being used as the foundational protocol for a vast array of communications. This evolution has already turned Telco providers into internet service providers and this will continue naturally. Increased competition in the retail market can only be achieved by removing Telstra's infrastructure monopoly – something the NBN company would achieve if it is allowed to complete as originally intended.

3.8.3.2 Electricity

The AEMO already recognizes that need to centralize network infrastructure and diversify production and retail organisations. This is a good start, but should be carried further with more government investment in long distance HVDC cables required to manage more distributed power plants required by renewable energy solutions. The network organisations must also deploy multiple, distributed energy storage solutions to the grid to support the uptake of solar photovoltaic panels on all buildings. This will help alleviate peak supply demands by storing solar power for use around the clock. Nickel-iron batteries would be an extremely appropriate technology considering Australia produces both minerals in abundance and these batteries are the best suited to intermittent charging as occurs with solar and wind generators.

The industry must be pushed to adapt to a more decentralized approach to generation. Building standards need to be introduced to ensure every residential, commercial and industrial building produces a percentage of its own electricity. This should begin at 50% and be increased annually; residential buildings should be required to produce at least 90% of their own power within ten years. If a building can produce all of its own electricity, it should be required to do so. If it can produce more to feed back into the grid, it should be required to do so. This constant addition of generating capacity with all growth will act to severely limit the need for the large, central generating plants that are currently required.

3.8.3.1 Water

No organization really produces water, they simply catch it, store it and supply it instead. This utility is the most in need of nationalization to protect the interests of all the people. Water must be seen as a basic human right and be made available to everybody easily. The cost of storage and transport of water is already captured and controlled by the government and this system must remain in place.

There must be changes to building standards to ensure every residential and commercial dwelling collects rainwater for local use. This includes systems on houses, apartment and office buildings with regulations enforcing a percentage of total use to be collected on the property. This should be not less than 50% for any residential or commercial building as a starting point. Commercial buildings will also need to actively deploy water saving systems in order to meet this requirement.

Industrial buildings may consume excessive amounts of water that make internal capture and storage unfeasible, but must also be required to contribute appropriately.

The continued sale of plastic water bottles must be strongly discouraged as it:

1. Is an extreme waste of energy producing plastic we don't need
2. Is polluting the environment with a huge mass of plastic that will not degrade
3. Is offering exactly the same product in different packaging with an enormous margin.
 - a. The price of water must be set and regulated explicitly such that the cost of bottled water properly represents only costs of water supply, packaging and transport.

Single use plastic containers of all kinds must be significantly reduced and replaced with sustainable systems of reuse and recycling.

3.8.3.2 Sewerage

This is another service that needs to have the network component nationalized, but with competition existing between processing plants over time.

In line with the general necessity of decentralizing utility resources, all buildings must be required to process a percentage of sewerage onsite. Whether this is for immediate use onsite or for later collection, this would contribute directly to local and vertical farming industries in the most productive way.

3.8.4 Government Investment as a Shareholder

If the government provides direct support to medium sized companies, it should result in a dividend paying shareholding in that company. Support should never be simply given away. This shareholding should then pay dividends as any other share in the company with those dividends received as government revenue. This kind of assistance should only be available for limited reasons:

1. Enable a company to expand operations significantly in a specific way
 - a. Establish export business
 - b. Establish business in another state
 - c. Establish new factory or building
2. Fund R&D programs that are in an industry or niche of interest for development.
3. Enable a company to divide into separate entities to better focus each organization.

This kind of support must be regulated such that a single company cannot claim multiple times to fund substantially the same goal without reaching that goal. Repeated attempts should attract a maximum of one third less assistance to a maximum of three attempts. After that point, no further assistance is allowed to reach that goal, but the shareholding is maintained to ensure some return should result.

This kind of investment body already exists in the form of government superannuation funds, these new investments should follow the same regulatory framework and improve on it over time.

This requirement does not apply to small businesses or startups, they can receive assistance and funding as required; but that assistance must be regulated to avoid abuse by speculative entrepreneurs. This means that any request for assistance must be accompanied with a detailed business plan that explains who will perform which tasks in what timeframe to accomplish the goals of starting the business. If the applicant cannot show a plan with reasonable effort given by

nominated people who have the time available to them, then no assistance will be available. This is aimed to prevent entrepreneurs from inventing multiple paper businesses to rot the system.

3.8.5 Foreign Investment

Foreign investment must be considered under extremely strict laws of citizen ownership of land and permanent structures. A foreign individual or entity can only rent land or buildings for a maximum term of twenty years. It can never be allowed to own sovereign assets outright. This would force foreign companies to engage with purely local companies to interact with and these local companies would operate under Australian taxation and corporate governance laws to guarantee good corporate citizenship.

As a part of these provisions, all land and buildings currently owned by foreign entities of any kind must have a sunset clause applied to that ownership. For a single residential property, this should be three years. For multiple properties within a single building, such as apartments, this should be eight years. For commercial buildings, the sunset clause should be for the time twenty years after the initial investment was made to ensure suitable return on investment is made. At that point these properties must be returned to Australian ownership by sale. The purchasing entity must be an entirely Australian company or individual citizen. Permanent residents can be permitted to own land as long as they are physically resident in Australia for more than two hundred days a year.

3.8.6 Maintain minimum wage in line with CPI

This should be enshrined in law as deeply as possible. Award wages cannot drop without significant intervention by the government to the same kind of level required by constitutional change.

Executive contracts negotiated on an individual basis should not be protected by this guarantee, the executives can negotiate their own terms.

3.8.7 Australia in the Asian Century should be the theme of all foreign policy

Australia should actively seek inclusion in the ASEAN group of countries to recognize our geographical location in that region and to further our alignment with the member countries. A free trade agreement has already been signed between Australia, New Zealand and the ASEAN nations, but this should be extended into full membership as a matter of priority. The resulting economy would be roughly double that of India and, with the inclusion of South Korea, would begin to be comparable to Japan. This would provide a huge strength in both numbers and economies to provide a counterbalance to the huge regional power that China, Japan and the US currently hold.

The proposed Regional Comprehensive Economic Partnership (RCEP) currently being negotiated would increase the ASEAN plus Australia and New Zealand group to include South Korea, China, India and Japan; creating the world's largest economic bloc.²¹⁹ Consideration must be made as to the overall benefits of such an agreement over a bloc that excludes China, India and Japan. The latter bloc would provide balance in the region as opposed to making all the smaller economies subject to dumping, economic hollowing²²⁰ and other abuse from China and Japan in particular.

With the likelihood of the US imploding into a mess of selfish greed and civil war, China will emerge as the leading world economy. Australia needs to be prepared for this eventuality by binding itself to our increasingly large and strong Asian neighbours. These ties should be far more than economic; they need to create a new community of nations that can work to bridge gaps of cultural understanding and find the strengths in the differences. Australia needs to introduce foreign

²¹⁹ <https://www.dfat.gov.au/fta/rcep/>

²²⁰ http://www.huffingtonpost.com/2011/05/12/nafta-job-loss-trade-deficit-epi_n_859983.html

languages into the curriculum from pre-school onwards to encourage these bridges to form. In addition we need far deeper multicultural education across the system to produce a new generation geared to work with the Asian community; rather than having Australia see itself as somehow belonging in Europe or the US.

We must recognize our geography and interdependence to forge a new kind of community across all of Asia.

3.9 Principles of Corporate Governance

The government exists as the representative of ALL the people they rule.

- Corporations exist as a representative of a specific active business interest.
- Unions exist as the representative of a specific active labour group interest.
- Communities exist as a group of people who share a culture of common goals. Eg, religious, sporting, business, social, craft, lifestyle, etc

In order to have a balanced society that operates overall for everyone's benefit, then the government must act to balance the interests of these three kinds of groups. To provide and preserve that framework of mutual benefit and balance, somebody must act as the referee in disputes. It is essential that the referee is both beyond reproach and does not act purely in the interests of any one of those entities. That referee is the legal system, which is already kept separate from the operation of government under the doctrine of the separation of powers. This doctrine could be strengthened to change the way judges are selected from the current system of political appointment.

Here are some principles to guide the interaction of these groups and the roles they play. This should inform all legislative decisions

3.9.1 The People Come First

If there is a direct conflict between the interests of society as a whole combined with the global environment and the interests of any one interest group, then the needs of society and the environment must prevail.

- Long term environmental damage is always to the detriment of society as a whole and must be punished seriously.
 - This is the essence of accepting Environmental Debt onto the accounting sheet of history.²²¹
 - Punishments for offences must be extremely harsh and escalate with repeat offences.
- Any policy that results in the sole benefitting of one group to the active detriment of multiple others must be struck down.
 - This is the Essence of accepting Social Debt onto the accounting sheet of history.
 - Punishments for offences must be extremely harsh and escalate with repeat offences.

Environmental Debt

²²¹ <http://environmentaldebt.net/>

The fundamental problem with making environmental factors accessible in economic modelling is that this requires a way to convert the natural world into an economic equivalent. What this has come down to is putting a dollar value on everything so it can be processed with economic models.

Whilst this approach can't really accommodate the sense of loss we have created in driving species to extinction and destroying pristine environments, it does at least represent a way of driving the right behavior from financial institutions and corporations. If the environmental inputs to the economic model make the business unprofitable; we all win as it is discarded.

There are already multiple environmental accounting systems, the System of Environmental-Economic Accounting (SEEA) is one widely used and supported globally by many organizations.²²² It provides a standard data set with agreed rules on its use and application to many aspects of economic modelling.

The compulsory adoption of such a standard to properly analyze all commercial operations is a necessary step towards accepting and paying our environmental debt. This must be much more than a simple environmental impact statement created at the start of a project or commercial operation; it must be a permanent component of all ongoing account keeping.

Social Debt

As environmental debt tracks the costs to the natural world, social debt tracks the continuing impacts of a commercial activity on society. Examples would be the provision of meaningful work to a large number of people in a community, or causing the lack thereof. Combined with environmental debt, this would allow the full costs of a continuing oil leak from a pipe that damages land a village used to use to grow food to be calculated and assigned to the corporation as debt.²²³

Triple Bottom Line Accounting

This would form the detailed basis to enforce 'triple bottom line' accounting, the idea that any business balance sheet should include lines for people and the planet before profit can be calculated.²²⁴ This must be the standard for business accounting in the near future. In order to provide corporations with reasonable notice time to train their staff to implement the change, this should be introduced over a five year period. The system should be operational in the third and fourth years to allow corporations to learn how to manage the systems before they are judged by them and face criminal prosecutions for perpetrating social and environmental crimes.

The depth and complexity of this system should vary based on the size and operations of the business. A corner store should have very light regulatory requirements, a business involved in industrial cleaning should have industry specific requirements and a multinational should have the highest level of legal compliance. The cost of such compliance is a cost of business and must be borne by the corporation entirely.

3.9.2 The Separation of Church, State and Corporation

Any church that engages in any form of political activity directly supporting, funding or providing assistance to a political group will lose its tax free status immediately and permanently.

Any corporation that engages in any form of political activity supporting, funding or providing public assistance to a political group is subject to progressive fines that begin at 10% of the average annual revenue for the last five years (excluding years the business did not operate) and increase by 10% with each successive offence.

²²² <http://unstats.un.org/unsd/envaccounting/default.asp>

²²³ <http://timesofindia.indiatimes.com/india/ONGC-crude-oil-leak-Jayanthi-Natarajan-visits-affected-villages/articleshow/17113273.cms>

²²⁴ <http://www.economist.com/node/14301663>

With the active redistribution of wealth to the greater community, direct funding by organizations will no longer be necessary or affordable. Only private individuals should be able to support political groups directly with whatever money they wish.

Further attention needs to be paid to the appointment of judges to supreme, federal and high court roles. These appointments today are entirely political in nature and this has blurred the boundaries of the Doctrine of the Separation of powers. Judges cannot be seen to be aligned with any political group and should be appointed by a different process. This should not be a direct election as this will only result in populist, charismatic applicants lacking the discipline to act as impartial judges of our law.

3.9.1 Harsh penalties for white collar crime

The failure to prosecute large banks for deliberate and consistent illegal activity because 'it may cause a failure of confidence in the organization' has confirmed a culture of no consequences for careless, selfish and illegal actions. The establishment of the rule of law over all individual and corporate entities is a necessary step towards giving people confidence in the system again. The costs of this new enforcement should be borne solely by corporations in the form of an annual levy.

Crimes that involve theft of sums of money above a million dollars should carry increasingly severe penalties matched with similar physical crimes.

A business that affects hundreds of thousands or millions of people should be liable for punishment in accordance with the severity of the affect. If the actions of the business or individuals resulted in ten thousand families losing their homes, for instance, this should mean jail terms equivalent to murder being applied. In addition to lengthy jail terms, they should lose all monetary benefits they gained while working for that business – including repaying their salary. The aim is to create a significant deterrent for individuals considering committing these crimes and to provide resources to ensure that they will be actively prosecuted and punished severely.

- All executives who presided over the event should also be personally liable for the responsibilities associated with their position in the organization.
- The claim that you did not know information that your job requires you to know should result in return of all salary, bonuses and benefits paid to you by the company as punishment for negligence, followed by being restricted from acting in any management role in any organization for ten years. After ten years you must compulsorily disclose this conviction to a future employer.

There needs to be an analysis performed for each such crime to establish:

- The number of people affected
- The severity of it
- How deliberate and malicious it was

This should then allow a mapping to physical crimes to draw parallels between assault, manslaughter, murder and equivalent financial crimes at scale. Multiple 'murders' should result in imprisonment for life.

The second layer of punishment must be a system of corporate fines for offences that are calculated directly from revenue for the year prior to the offence being committed. For a first offence, the fine should be 10% of the average annual revenue for the last five years (excluding years the business did not operate). For each successive offence, the amount will increase by a further 10% such that the tenth offence would claim the entire annual revenue.

This dual level of punishment, both corporate and personal, should act as a sufficient deterrent for any company executive looking for short term profits at any cost.

Revenue raised from these penalties should go to funding the legal system handling these cases to ensure it is well supported to keep case times as low as possible. The aim is to make this a process that can be entirely completed as quickly as possible to let the decision be made and everybody to go back to their lives. Any excess revenue should be directed to either greater health and education services or a reduction to individual income tax rates.

3.9.2 Society Needs Business

Every society needs a well-functioning business community from the smallest sole trader to the largest multinational corporation. All levels of business have something to offer society as a whole, but they can only operate in society's interests if given the right guidelines to work within. The focus must be on entrepreneurial startups and small or medium businesses that account for the majority of job creation and sustainability.²²⁵ They also account for the majority of strong business innovation.²²⁶ Any government that claims to support business, but fails to direct the majority of resources to this sector, is fundamentally failing to achieve their goals.²²⁷

This isn't to say that corporations have been an entirely destructive force on society. They have also served to provide the impetus behind bringing the global population together in trading empires. They have funded the spread of internet access globally that has helped the new era of global revolts endlessly. They have broken down national walls and made it possible for an individual to run a multinational business – look at the sellers on eBay, Etsy, Amazon and a million other business sites if you think that is an exaggeration. They have produced a global monetary system that allows fortunes to traverse the globe in milliseconds. These were all necessary steps to enable the people to take their place as entrepreneurs in a global marketplace. The age of the corporation must give way to the age of the collaboration.

Business Collaboration

There have been numerous shared business spaces created in cities around the world to foster small business collaboration. Organizations like Hub Australia form a part of a global network of similar spaces in forty cities across five continents.²²⁸ These were created to encourage and enable collaboration between otherwise disconnected businesses. This increases the chance of meeting the people you need to progress your own ideas as well as helping other people progress theirs. This global, collaborative economy of entrepreneurs is the way of the future. This is exactly the system we need to encourage to break the stranglehold of corporate greed.

Benefit Corporations

The advent of 'benefit corporations', B-corps, also shows a different approach to the problem by redefining the aim of corporations. This represents a conscious move from being solely focused on generating profit for shareholders to instead aspiring to do no harm and provide benefit everybody along the pathway to turning a profit.²²⁹ Essentially B-corporations espouse the need for triple bottom line accounting in all businesses; people, planet and profit. This changes the nature of the

²²⁵ <http://www.innovation.gov.au/smallbusiness/keyfacts/Pages/smallbusinessdatacard.aspx>

²²⁶ <http://www.innovation.gov.au/smallbusiness/keyfacts/Documents/AustralianSmallBusinessKeyStatisticsAndAnalysis.pdf>

²²⁷ <http://www.smartcompany.com.au/finance/tax/30370-government-cuts-r-d-tax-break-for-big-business-to-provide--1-billion-boost-to-smes.html>

²²⁸ <http://hubaustralia.com/about-us/global-hub-network/>

²²⁹ <http://www.bcorporation.net/what-are-b-corps/the-b-corp-declaration>

organization from a focused psychopath chasing only profits, to an entity functioning within, and as an integral part of, a bigger community. This would teach the child-like modern corporations to grow up and learn to share. This kind of mature social behavior would represent a powerful change in the general operation of business. This also creates some self-regulation by these entities whereby they will report each other to the certifying group since they understand that failure to do so will result in a break of trust with the consumer that ultimately hurts them all. A new part of business competition will be keeping wholly within the B-corporation definition, lest your competitors report you to the regulating body.

Cooperatives and Mutuals

“They represent a more socially responsible form of business enterprise because their focus is not on maximising profits for other investors, but on maximising benefits through the provision of goods or services to members. The members may be in a particular geographical community or they may simply have a common business or social interest.” (Cooperatives in Australia – A Manual)²³⁰

There are a large number of cooperative businesses operating in Australia with huge success; around 1800 cooperatives and 108 mutual banking organizations. Around 79% of Australians are a member of some kind of cooperative or mutual organization, which explains why they collectively generate almost \$18 billion a year in revenue.²³¹ Well known cooperatives include Automobile clubs (eg, RACV, RACQ) and agricultural societies (eg, Murray Goulburn Cooperative, Dairy Farmers Milk Cooperative).²³²

The primary attractiveness of this kind of business structure is that the customer is also the owner investor. This means that profits produced by the organization are used purely to benefit the members. There are no external shareholders with a purely capital interest. They have been used to create a large body to represent the common interests of a group to provide greater bargaining power; like a union but actually operating the business. They are also used in small businesses as a worker’s cooperative to provide greater incentive for individual workers to contribute to the success of the operation, as they will directly receive a share in the profits. Sometimes this has operated in a mixed mode whereby workers are given shares in the company as a part of their packages as well as opening shareholding to external investors with a purely capital interest.²³³

One of the more famous global worker’s co-operatives is W.L Gore and Associates, the creators of the Gore-Tex material. Not only do all employees share in profits, but they operate in a ‘lattice’ organizational structure. This means that there are no bosses or hierarchy and everyone is an equal associate.²³⁴ Leadership comes naturally as people align to follow different individuals based on their ability to guide a team in delivering results. The result has been they have one of the very lowest staff turnovers of any company and have featured in the Fortune magazine annual ‘100 best companies to work for’ since 1984.

In early 2014 new national laws agreed to in 2012 began to take effect across Australian states to provide a standard, national legal framework for cooperatives. Historically these organizations were registered and operated on a state by state basis, making it difficult to run larger organizations with

²³⁰ http://www.rdamnc.org.au/wp-content/uploads/Coop_Manual_FINAL.pdf

²³¹ <http://bccm.coop/downloads/sector-at-a-glance.pdf>

²³² <http://www.australia.coop/ca/images/Top100August2012.pdf>

²³³ <http://www.employeeownership.com.au/employee-ownership/>

²³⁴ http://www.gore.com/en_xx/aboutus/culture/index.html

national memberships of common interest.²³⁵ This new recognition will make this an even more powerful force for promoting socially responsible business.

3.9.3 Business Needs Society

Business is important, but not more important than the quality of life of the bulk of the population. Corporations must work within the structure government imposes to ensure the people and a regulated market are the result. A free market is a utopian myth that exists only in the imagination of economists. The term 'free market' has been twisted in the last few decades to carry only the meaning 'free from government regulation'. It is then further warped by the hypocrisy caused by greedy rich people who maintain that government interference distorts markets, yet actively pursue corporate welfare programs. They are against government interference with their interests, but support receiving taxpayer money without providing benefit in return. This is the culture of greed that must be struck down.

What is required after this change in definition of a corporation is a balancing force on the market to ensure we gain the benefits of innovation and competition without the stagnation of corporate monopolies. The incredible deregulation of the US market since 1980 has shown clearly that this approach only achieves a concentration of wealth in the hands of the few; it guarantees monopolies are the result. This can be directly, where a single company operates in an industry²³⁶, or indirectly, where a single umbrella company owns a controlling share in multiple subsidiaries²³⁷ that pretend to compete.²³⁸ In order to balance off the tendency for large corporations to swallow smaller ones, engage in anti-competitive practices and outright distort the market in their favour; there needs to be a balancing force.

This balancing force is provided by the government in the form of a program that actively takes profits from large corporations and redistributes them to incubate entrepreneurs, startups and small business. This incubation is aimed to protect small business from anti-competitive activities and supporting them to grow as required within the principle of a zero global net growth sustainable economy. The aim is to teach, train and encourage new businesses at the expense of old ones, creating a dynamic marketplace dedicated to reinventing itself perpetually within a zero global net growth balance sheet.

In order to maintain the effectiveness of the incubation program; above a defined level, no corporation can receive ANY subsidy, rebate, tax relief, or support in any form, from the government. That level in 2013 should be set for any business that receives over \$1 billion in revenue. If their business model cannot operate without government assistance once they are this large, they don't deserve to be in business and instead should fail and become fodder for the next generation of the business community. This promotes real market competition to ensure business leaders are focussed on service provision and innovation instead of wasting taxpayer money on corporate welfare.

Any business must recognize that it owes a debt to every society and the world in which it operates. An obvious example of this debt includes the incubation help received when it was a small business. There is also the cost to government to provide the safe, stable society, a clean environment and the regulated marketplace that business needs to operate most effectively.

Since it owes this debt, it must be paid from its profits.

²³⁵ <http://www.abc.net.au/news/2014-03-05/co-operative-law-business-structure/5299992>

²³⁶ http://www.brw.com.au/p/investing/australia_online_monopolies_are_np2sLreue05CSgDcpsDx4N

²³⁷ http://www.huffingtonpost.com/2012/04/27/consumer-brands-owned-ten-companies-graphic_n_1458812.html

²³⁸ http://www.cracked.com/article_18845_6-secret-monopolies-you-didnt-know-run-world.html

This is after paying all workers fair wages, providing a safe and productive work environment and satisfying all operational partners and creditors. This profit tax serves to ensure that large business always returns the favours provided to it by government, society and environment; it is not payable by small business at all. The cutoff to attract the profit tax in 2013 should be any company with annual profits over \$500 million and this value should be adjusted annually.

A profit tax will be levied on all companies such that they cannot avoid tax and pay shareholders dividends at the same time. Before any dividends can be paid the profit tax must be accounted for, to some extent, this is an extension of the franked dividend system in Australia. The tax level will be progressive such that above a certain point, all further profits would go to the government. It should start at 2% of profits at the \$500 million mark and work progressively up to 100% of profits after the \$2 billion mark in annual profits. The skill in running a large business becomes staying small and focused enough to escape the profit tax, but large enough to be permanently viable. A new breed of smarter business manager will be required. The aim is that they are so busy competing in the market, there isn't enough time or money to waste on regulatory capture.

The form of this redistribution can be more creative than current grant programs or government allocations. Perhaps people can nominate kickstarter style projects on a government website as a part of their tax return process each year. Half the revenue is then allocated according to popular desire. The other half can be allocated by a group of business leaders who change every year. This balances popular ideas with ideas that have the most attractive business cases. In order to get a project listed on this site, the business startup would need to meet a series of requirements to produce a business plan, cost models and appeal for funding. The aim would be to filter out both people without a good idea or plan as well as people trying to make their business plan getting money via this program. If a business receives money from this source, neither it, nor its owner can apply for any further funding for three years. This encourages them to give the startup all their attention to make it a viable ongoing business. It must also provide regular reporting along the lines of current grant programs.

The aim is to put both purchasing and entrepreneurial power firmly back into the hands of the masses.

3.9.4 Government Regulation to Avoid Regulatory Capture



The first part of this answer lies in allowing donations to political parties to come only from individual citizens. This means corporations looking to lobby cannot so easily bribe a party with the essential media support they need. Further legislation needs to be added such that if they want to support or attack a party directly in the media, they have to do so with their own money and state publicly who paid for the campaign.

The longer term answer lies in not regulating particular industries so closely, but regulating all commercial organizations for compliance with legal safety, environmental and sustainability standards. These standards must be expressed clearly and simply to change the job of the

ombudsman from interpreting law to applying the standard rules to the facts of each case. Breaking these standards must carry escalating penalties such that each successive offence results in an exponential increase in punishment. Legal non-compliance cannot then become a cost of operation; it will eventually claim the entire organization in punitive damages. Money claimed in this way is to be used to fund the programs associated with the standards the company was breaking. The program would be regularly funded by a levy placed on the industry with individual organizations paying their share based on annual revenue from the previous year.

These standards should be widely known and distributed with an Ombudsman appointed as required for different industries. The job of the ombudsman is then to strictly apply the standard to the company's actions. If a breach is noted, then the case is handed over to the legal system for resolution. Lesser penalties should apply if the company admits guilt; the risk of challenging and lengthy law suits is then that far higher penalties will apply. As a second line of attack, any person can require the ombudsman to investigate a claim of breach, such that companies can use the system to keep each other within standards. As a third measure to avoid regulatory capture, the staff of the ombudsman office must be changed on a staggered, but regular, basis between monitoring different industries. This means they become experts at applying clear rules to facts, rather than needing to be industry experts.

3.10 Financial Industry Regulation

The actions of the banking and finance industry in particular have shown a reckless abandon with the world's finances that is likely to cause an immense global crash in the next few years. The bailout of the US mega banks in 2008 resulted in an even greater conglomeration of financial institutions into fewer, larger bodies capable of inflicting permanent damage on the global economy. This behavior must be stopped and the financial industry requires special attention as a result.²³⁹ They have proven that they simply cannot be trusted with self-regulation, behaving like spoiled schoolkids, and now they must be brought to account.

In order to drive the right behaviours without losing the benefits of a global financial system, governments worldwide must adopt new, stringent regulations on all financial institutions. Australia can be a leader in these provisions to show the world how to strike a far more intelligent balance between the desires of business & finance and those of the people and the environment.

3.10.1 The Creation of Money

The government needs to return the power to create money to a government controlled entity that is fully audited, transparent and subject to public scrutiny on all its operations. The current situation where a group of international banks determine policy for many countries is unacceptable as they routinely help themselves at the expense of the sovereign, elected, powers. The current state of the creation of all money as debt by financial organizations must be stopped and changed – there are better alternatives.²⁴⁰ This will cause the Ponzi scheme we call the global economy to crash and that is an intended result. The endless debt cycle must be escaped by cancelling the majority of it and placing any remaining burden on financial institutions to repay over time.²⁴¹

²³⁹ <http://www.rollingstone.com/politics/news/gangster-bankers-too-big-to-jail-20130214>

²⁴⁰ <http://www.positivemoney.org/how-money-works/how-banks-create-money/>

²⁴¹ http://wiki.mises.org/wiki/Criticism_of_fractional_reserve_banking

Money should primarily be created by governments with no debt attached²⁴², this removes the endless cycle of unpayable debt that the banking industry inflicted on the US in 1913²⁴³, that became a world standard over the following decades. If government expenditure of created money becomes a primary way new money enters the economy, then any further creation of money must be made subject to this amount. The current practices of banks creating infinite money to pay for infinite debt and shuffling the debt burden between entities is unsustainable.²⁴⁴ Hence, any further money supply required on an annual basis should come only after government expenditure needs are complete. As a result, governments will no longer be burdened with artificial debt that enslaves them to the interests of the financial community. If further creation of money would destabilize the currency, then no further money is created and the banks must return to full reserve banking practices. This allows a focus to be made on maintaining and improving national infrastructure and services instead of the international gambling currently undertaken by banks.²⁴⁵

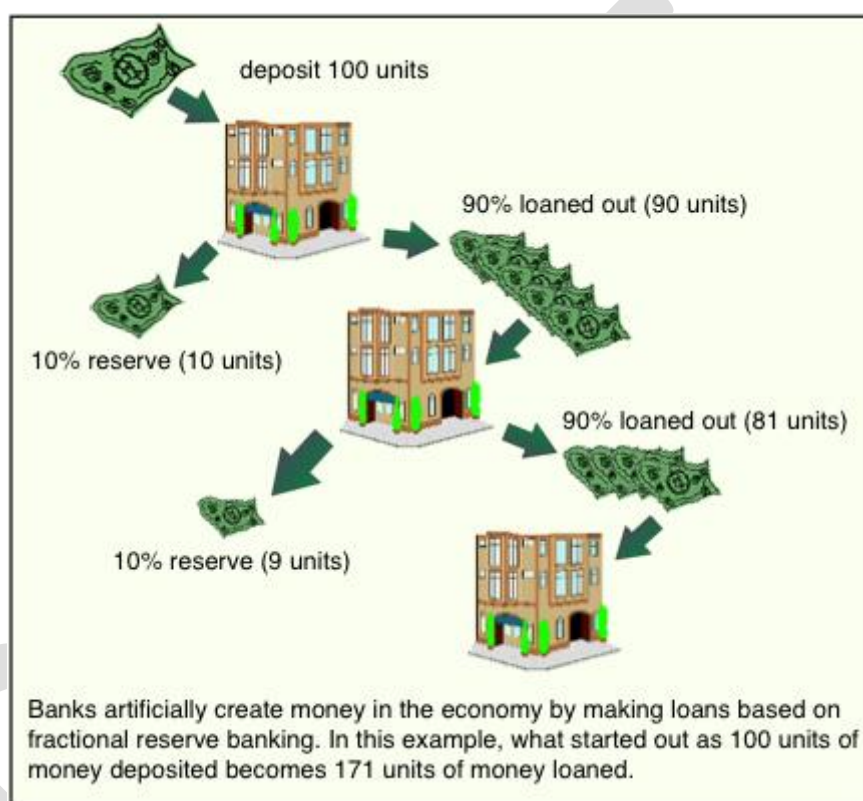


Figure 34: Fractional Reserve Banking

3.10.2 Reconsider fractional reserve banking

Fractional reserve banking as a system puts too much power in the hands of unelected, unrepresentative people with an agenda that runs counter to the best interests of the majority of people in any country. Bringing back the power to create money to the government creates a natural balance in the process, so that banks no longer have the power or desire to create endless money to feed the endless artificial debt. The nature of this change must be made subject to the

²⁴² <http://2joz611prdme3eogq61h5p3gr08.wpengine.netdna-cdn.com/wp-content/uploads/2012/02/Full-Reserve-Banking-in-Plain-English1.pdf>

²⁴³ <http://www.forbes.com/sites/markhendrickson/2013/12/20/100-years-later-the-federal-reserve-has-failed-at-everything-its-tried/>

²⁴⁴ <http://grayson.house.gov/media-center/press-releases/grayson-letter-on-preventing-big-banks-from-gambling-with-taxpayer-money>

²⁴⁵ <http://www.rollingstone.com/politics/news/the-great-american-bubble-machine-20100405>

primary principle of a Sustainable Zero Net Growth economy and that only governments can create money. Financial institutions must be made to serve the whole population, not a small subset of greedy bankers.

3.10.3 Put reserve bank back under complete government control

The reserve bank is a useful construct, but must be made wholly accountable to the government and the people. It must become transparent in its dealings and any requests for action from global institutions a matter of public record. Global financial institutions have proved they cannot be trusted and the fact they are not accountable to anyone is a primary factor.

3.10.4 Financial Transactions Tax

All organizations engaging in financial transactions that exceed a set amount per annum should attract a tax on EVERY transaction (including the ones below the threshold). This kind of tax has already been established in multiple European countries and there is a group of European Union countries attempting to have it implemented across Europe. The aim there is to force financial institutions to repay the taxpayer's bailout money they received as well as provide a solid contribution to government funding generally.²⁴⁶ This is meeting a lot of resistance from the financial industry of course and the start date of the Europe wide program has been delayed.²⁴⁷

This small businesses and individuals are will never need to pay this tax. This tax is aimed at:

1. Financial organizations that use high frequency trading and other large scale capital movements to generate profits on the international market.
 - a. This tax is payable by any organization moving large amounts of money around for any purpose.
2. Foreign investors of any kind that seek to take money out of Australia.
 - a. This tax would be payable by ANY organization moving money into or out of Australia for any reason.

Punishments for attempting to avoid this tax should follow the same logic as the new white collar crimes, attracting a progressively higher fine calculated as a percentage of total revenue; that increases with each successive offence to provide an effective deterrent.

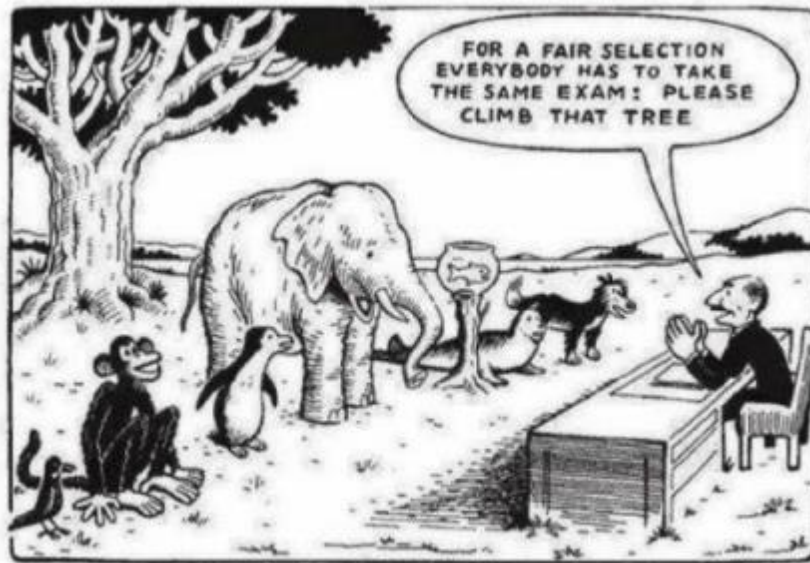
The revenue captured by this tax would be directed to fund the new industry ombudsman regulation program and to support the expected extra load this new regulation will place on the legal system for the first decade of operation. Any excess should result in either greater health and education services or a reduction to individual income tax rates. This tax could capture \$10 billion a year in Australia.²⁴⁸

²⁴⁶ http://ec.europa.eu/taxation_customs/taxation/other_taxes/financial_sector/index_en.htm

²⁴⁷ <http://www.eubusiness.com/news-eu/france-economy-tax.twr>

²⁴⁸ <http://www.jubileeaustalia.org/page/work/ft-tax>

3.11 Education



Our Education System

3.11.1 Changing How We Think About Education

In a changing world of global economies, internet access, shifting workforces and expanding technology, how do we best prepare our children for the future? The only thing that's clear is the current system is failing all of us. Please follow this link and watch this explanation for some clarity on the depth of the issue.

[Changing Education Paradigms](#)

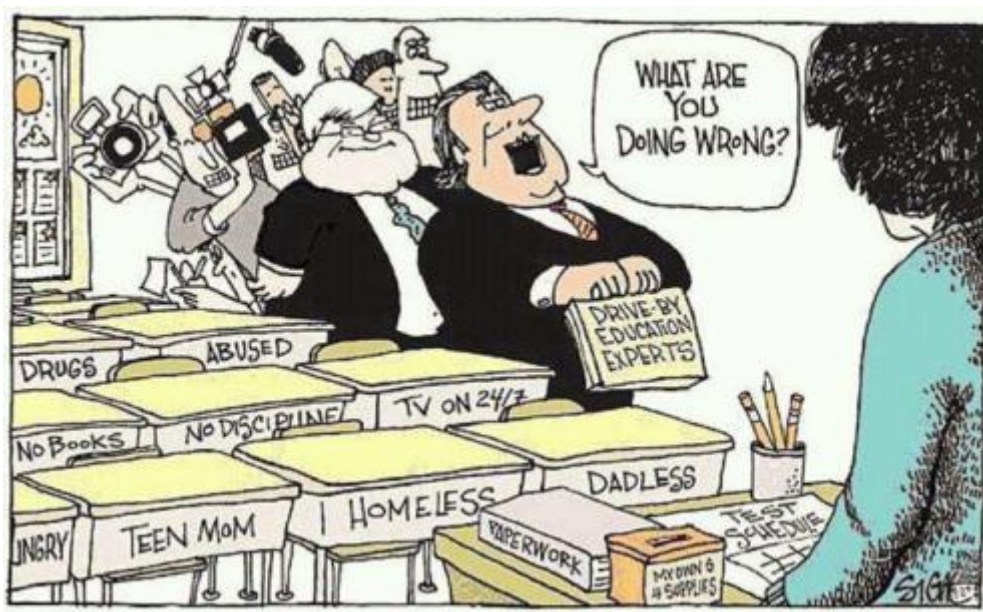
3.11.2 Gonski and Funding

The Gonski report established the need for revision of how government money is distributed to schools across the country to properly assist schools handling children with special requirements. Many private schools and the coalition parties did not accept this conclusion as it would mean a dramatic reduction in government funding for them, since they do not suffer disadvantages and routinely avoid accepting special needs children.²⁴⁹ The Gonski recommendations on funding should be adopted in full at the earliest possible moment. They represent an important levelling in funding to the Australian education system as a whole. Government schools should receive the lion's share of public money. If people want to setup a private school system for any reason, they can pay for it themselves. It is not up to the government to provide support for religious organizations and a tiered education system for the rich.

However, all schools must be held to account for teaching and examining fundamental skills in reading, writing and mathematics to ensure that all Australian citizens share a high standard of communication and calculation skills to handle daily life. In the process of teaching and enhancing these skills, many other subject areas can be covered that all require increasing complexity of communication and calculation. The focus, however, should be on examining and standardizing only

²⁴⁹ <http://wheelercentre.com/dailies/post/968ab248d6a1/>
<http://www.aeufederal.org.au/Publications/2010/StudentsWDisabilities2010.pdf>

those core skills on a national level; all other outcomes should be subject to a far broader spread of teaching and learning environments.



3.11.3 The Aims of the Australian Education System

The Gonski report did underline the importance of other elements of education that cannot be readily level tested across the population.

“Academic goals are far more readily measured and reported by external testing than general capabilities. However, an excessive focus on what is testable, measurable and publicly reportable carries the risk of an imbalance in the school curriculum. Independence, confidence, initiative and teamwork are learned as much through elements of the curriculum that are not readily measured by an external test as through those areas in which outcomes can be readily tested and reported.”, Gonski Report, s5.1.2²⁵⁰

This asks fundamentally different questions:

- What is the aim of the education system?
- What are we actually trying to teach all our children?
- What results are we expecting from this system?

It seems the current answers to those questions are most truthfully put as:

- To provide purely vocational training aimed at entering the workforce to be able to buy a house & car and raise a family
- That the only valid goals in life are to have a stable job that pays for a house & car and to raise a family
- Conformity, consumerism, positive acceptance of the status quo, apathy

So are those answers so wrong? Not entirely, but they’re not entirely right either and are severely lacking in the education needed for Australia to embrace the new world we find ourselves in. The “Melbourne Declaration on Educational Goals for Young Australians” of 2008 brought together all

²⁵⁰ <http://www.appa.asn.au/content/gonski-report/Review-of-Funding-for-Schooling-Final-Report-Dec-2011.pdf>

the education ministers in Australia under one banner to set the goals for Australian education.²⁵¹ In order to explain and define these goals, there was a formal recognition of the changing needs of the Australian nation.

- “– Global integration and international mobility have increased rapidly in the past decade. As a consequence, new and exciting opportunities for Australians are emerging. This heightens the need to nurture an appreciation of and respect for social, cultural and religious diversity, and a sense of global citizenship.*
- India, China and other Asian nations are growing and their influence on the world is increasing. Australians need to become ‘Asia literate’, engaging and building strong relationships with Asia.*
- Globalisation and technological change are placing greater demands on education and skill development in Australia and the nature of jobs available to young Australians is changing faster than ever. Skilled jobs now dominate jobs growth and people with university or vocational education and training qualifications fare much better in the employment market than early school leavers. To maximise their opportunities for healthy, productive and rewarding futures, Australia’s young people must be encouraged not only to complete secondary education, but also to proceed into further training or education.*
- Complex environmental, social and economic pressures such as climate change that extend beyond national borders pose unprecedented challenges, requiring countries to work together in new ways. To meet these challenges, Australians must be able to engage with scientific concepts and principles, and approach problem-solving in new and creative ways.*
- Rapid and continuing advances in information and communication technologies (ICT) are changing the ways people share, use, develop and process information and technology. In this digital age, young people need to be highly skilled in the use of ICT. While schools already employ these technologies in learning, there is a need to increase their effectiveness significantly over the next decade.”*, Melbourne Declaration on Educational Goals for Young Australians, 2008

After setting this stage, the goals were stated more simply:

“Goal 1:

Australian schooling promotes equity and excellence

Goal 2:

All young Australians become:

- successful learners*
- confident and creative individuals*
- active and informed citizens”*, Melbourne Declaration on Educational Goals for Young Australians, 2008

Whilst that does sound like a positive start to a goal setting document, the clarification that the only purpose of education is to have a job and that all students should be encouraged to spend more time in the educational system to have a better job seems self-serving at best. Sure education ministers think more is better, but is it? Is this vocational education aimed at working for someone else in increasingly large, consolidated organizations really the focus we need? The statistic on further education resulting in higher salaries seems logical, but how does the evidence support the idea?

²⁵¹ http://www.mceecdya.edu.au/verve/resources/national_declaration_on_the_educational_goals_for_young_australians.pdf

It turns out that for some professions, the average person ends up with 10-20% higher pay with tertiary education over their life.²⁵² For others there is either no benefit or, in fact, the person would have been better off leaving the system after secondary school and gaining direct work experience.²⁵³ In fact, the value of higher education seemed to peak in 2001 and dropped by 2006 back towards the level it was at in 1981. The final unsettling point from these and other studies is that pursuing a Masters degree fulltime is a waste of money, but can work if completed part time as part of a specific career advancement plan within very few industries. So the claim that spending more time in an education system will benefit all citizens has no evidential basis, in fact, for many people the reverse is true.

The industries that do not pay a return on education are associated with the fields of arts, humanities and education. This shows that we have let economic rationalism and neoliberalism destroy our culture in the pursuit of material wealth. We need to rebalance our society and education system away from supporting only those few career paths that offer pure economic gain for the individual. We need to place more value on education and the role many different people play in our society. This does not mean we pay everybody equally in the end, higher skilled jobs should attract more rewards and higher risk jobs should also come with the potential for higher rewards. High skill does not mean a long time spent in a formal education system. It would mean that some people leave the academic school system to pursue different paths towards creative arts, apprenticeships and other practical work. It would also mean changing the nature of higher education to focus more on building critical and creative thinking capabilities, entrepreneurial and collaborative outlooks and a core skillset for a particular industry. Further training required for an industry should be provided by and paid for by that industry – not the government. The aim of higher education would be to foster a critical thinking, connected, collaborative generation who can reap the benefits of cross-fertilization from many studies to produce the kind of innovation that Australia needs.

So if we really think everyone in the country is going to desire and enjoy and career as a dentist, doctor or IT specialist, then the current system is working. If we accept that there is a huge diversity in what work people find fulfillment in and all of this work is contributing to our society as a whole, then we need to seriously revise this goal.

Today global competition and 'free trade' agreements have destroyed entire Australian industries and shifted well over a hundred thousand jobs overseas. Losses continue unabated in the tens of thousands every year, in a process that appears to be entirely supported by the government.²⁵⁴ In that environment, we do not need compliant workers and consumers, we need a generation of entrepreneurs, visionaries, scientists, engineers and collaborative workers who can pull together to change the face of the country. We need a generation of Australians who can work to build the huge amount of new infrastructure we need, who can develop new industries and reorganize the existing ones to work for the nation's future. We need a generation of Australians who can join in large, collaborative organizations to make sure we use every last capability in the country for the benefit of all. The current education system in operation is utterly incapable of providing any of these results. It would instead leave Australia a gutted country of mine workers and middle management run by foreign corporations for the benefit of foreign investors.

So is this just a utopian dream? Is it too late? Are we up to the task?

In order to bring this vision closer to real life experiences, we can examine the Finnish primary school system in escaping the parrot learning style of national examinations. The Finnish system

²⁵² [http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/FFF12BBAB5051BFFCA25778C001F6903/\\$File/1351055032_aug%202010.pdf](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/FFF12BBAB5051BFFCA25778C001F6903/$File/1351055032_aug%202010.pdf)

²⁵³ <http://www.innovation.gov.au/highereducation/Policy/BaseFundingReview/Documents/PrivatebenefitsofHEreport.pdf>

²⁵⁴ <http://www.fsunion.org.au/News-Views/MEDIA-RELEASE-80000-service-sector.aspx>

gained a lot of international attention for the very high level of literacy, numeracy and science education in the average student. There are many reasons for this, but the fundamental one was a complete reevaluation of the system that focussed on providing a diverse set of goals with freedom given to teachers to reach them in any way they choose.²⁵⁵ This re-evaluation, combined with:

- the very high social status (and pay) that teachers hold in Finland (equivalent to doctors and other professionals),
- small classroom sizes,
- all education being free and including health care and lunch for students

work together to provide an environment in which learning is able to happen easily and effectively. This meets a real need for an effective education system; socio-economic disadvantage, health and disability should have little to no impact on the student who wants to learn.²⁵⁶

This is another instance to consider the idea of Maslow's hierarchy of needs.²⁵⁷ Even though the pyramid of needs is not strictly hierarchical (people can become self-actualized from backgrounds of poverty) it does form a good baseline for organizing an education system within society as the chance of people achieving more and reaching further must increase given fulfilment of the basic needs. Combined with an education focus on collaborative entrepreneurialism, this becomes an environment conducive to produce the generation of innovative, creative and business minded Australians we will need to mould our future.

3.11.4 The Internet and Information



**"If it's on the
Internet,
it must be true!"**

The world is already moving towards an internet focus for all information consumption and an understanding of how to use this resource must be an integral part of our education system. The government today is currently spending most time providing support for online safety concerns such as cyber bullying, stalking and illicit materials. These are all incredibly important foundational skills, but there needs to be more attention paid to the skill of filtering information from the internet. The ability to apply principles of critical thinking to raw information is crucial to know how to filter and organize it according to its authenticity and source. Equipping all our children with the ability to determine a well-structured lie from a poorly written truth will be one of the best investments we will make in the information age.

²⁵⁵ <http://www.scholastic.com/browse/article.jsp?id=3749880>

²⁵⁶ http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2013/liitteet/Finnish_education_in_a_nutshell.pdf

²⁵⁷ <http://www.simplypsychology.org/maslow.html>



3.11.5 Academic and practical skills education from start to finish

So we're building a picture of a primary school system that lets kids experiment and play with ideas, but delivers core skills in literacy and numeracy – with an attitude of 'whatever it takes for my students to learn, I will teach'. Small class sizes, ongoing assessment with no exams and minimal formal homework. This would encourage curiosity and experimentation to develop the active citizens we need. The time spent in sections of the mandatory education system should vary for different students according to ability and inclination. If a student shows practical talent greater than academic, then they should be encouraged to pursue that talent with less focus on academic learning. Facilities for this need to be just as well-resourced with all the tools, equipment and teachers required to learn practical skills. This migration may be complete for some students and partial for others. Creative arts often combine academic and practical skills. There should be no problem with a student pursuing a variety of these studies according to ability and enthusiasm.

3.11.6 I belong to an amazing, huge and diverse World

In the course of the years spent with an academic focus, curiosity and experimentation should become more rational scientific processes, critical thought and a value of the pursuit of evidential truth over temporary failures. At the same time, an ongoing study of multicultural philosophy and appreciation of aesthetics is needed for everyone; a study that introduces abstract ideas along with forms of art and expression. As a part of this, every student should be exposed to other languages from as early as possible. Encouragement to learn at least one other should be strong and a part of this, greater formal education in English grammar is an absolute requirement. Whilst Asian languages should be strongly supported, the greater the diversity offered; the better.²⁵⁸ Being exposed to other languages while young provides an incredible shared understanding and acceptance for multiple cultures for all children.²⁵⁹ As the Czech proverb says,

"As many languages you know, as many times you are a human being"

If groups of kids find a common interest, then collaborative learning and development should be encouraged. As a foundational point to all of these outlooks is support and development of

²⁵⁸ http://www.earlychildhoodnews.com/earlychildhood/article_view.aspx?ArticleId=60

²⁵⁹ <http://travelsort.com/blog/10-reasons-why-your-child-should-learn-a-foreign-language>

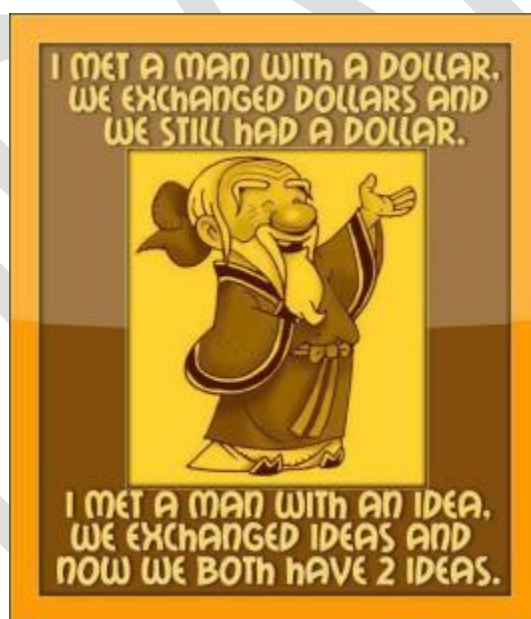
empathy in all citizens. The fundamental understanding that you share your life with other people, animals and plants within an amazing global ecosystem that encompasses all of us should be a fundamental goal of any education system.²⁶⁰ This allows us to guard against the greedy few being able to receive the support they need to reach adulthood with such immature and anti-social attitudes intact.

3.11.7 I understand my political system and how to use it

Understanding our political system needs to start in primary school and develop and evolve throughout the education system. Starting with how elections work, to running them, to studying the levels of government in detail and finally interacting directly with government bodies. Every student should understand what an active democracy is and how connected they are to the future of their country through their influence on political processes. This understanding should grow deeper as a student progresses and can form a part of the collaborative projects they must undertake towards the end of mandatory schooling.

3.11.8 My group can do far more, far better than I can alone

Towards the end of the mandatory schooling period, collaborative work must be a valued skill to be developed. This should bring the two sections of learning style back together again. As a natural extension to curiosity and discovery, this aims to show the value of a variety of team members with different strengths in achieving results. Complex tasks that require both practical skills and academic curiosity and abstraction act to bring together groups of people. Building a vehicle, or solving a real life problem are good examples; competing between teams on both tasks is even better. Combining the strengths of a group of people should result in a far greater outcome than any of these individuals could manage by themselves.



3.11.9 Sometimes less education is more

At the end of the mandatory period, students should have the option to leave the education system, or continue for longer to achieve different results. This might take the form of an apprenticeship, higher education course or combinations of the above. From this level of education there should be a theme looking towards business goals and planning such that anybody completing the courses

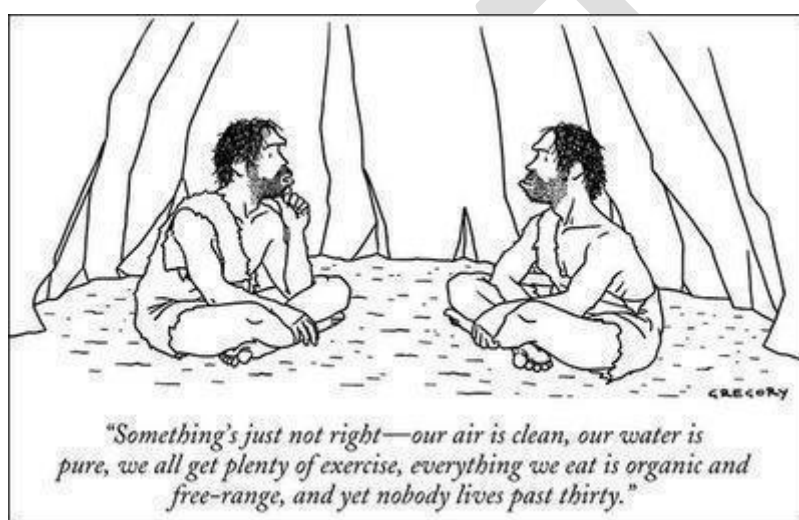
²⁶⁰ <http://www.youtube.com/watch?v=l7AWnfRc7g>

would also have a basic knowledge of how the government will support them to get started and what they might achieve by taking the high risk path of developing completely new products and services.

As a final point to extended resourcing for the education system as a whole, there should be some attention paid to providing more expensive and complex facilities for groups of schools. These would be directed towards the particular outcomes of the schools, their locations and the communities that surround them. It might include research farms, laboratories, electron microscopes, geographical imaging systems, satellite communications, telescope and advanced manufacturing like 3D printers. Introduce all these facilities to young kids and have them return as they get older to experience and explore them in more and more detail.

That education system will be the catalyst to build the society to run the systems that drive the sustainable economy of Australia's future as a part of Asia and a global citizen.

3.12 Health Care



Whilst this is not an issue directly connected to the primary aims of addressing climate change in a world of neoliberal governments, this does bear a strong mention. The health of a nation contributes directly to its overall prosperity, so providing a freely accessible system to all citizens is in the best interests of any country.²⁶¹ The Medicare system in Australia has been under attack from the neoliberal federal and state conservative governments since 1996. This has taken many forms, but the most insidious is the redirection of government money to pay the private health insurance industry to do work better performed by the government.²⁶²

The primary reason given for the introduction of this system was to reduce the load on public hospitals by redistributing patients to the private system. This has proven to be a completely unsubstantiated misleading of the population as this reduction has never occurred. What it actually provided was taxpayer funding for wealthier members of society to jump the queue to receive surgery earlier than funding of the public system would provide.²⁶³ This now amounts to over \$5 billion a year in welfare for the rich who simply don't need it. Even factoring in the increased costs in the public system as a result of people cancelling their private health insurance, studies from 2013

²⁶¹ <http://www.nber.org/papers/w8587>

²⁶² <https://theconversation.com/why-its-time-to-remove-private-health-insurance-rebates-16525>

²⁶³ <https://theconversation.com/things-you-should-know-about-private-health-insurance-rebates-15560>

show there would be a net increase of around \$3 billion available to spend on the health system.²⁶⁴ Redirecting this amount to reducing queue times would have a substantially greater effect on the national health system. There is still demand for private health care and this should continue; it just doesn't require taxpayer's money to do so.

²⁶⁴ <http://www.smh.com.au/federal-politics/political-news/abolishing-health-insurance-rebate-would-save-3b-analysis-20140109-30kkc.html>

4 The Next Milestone...

So there's the start of a platform for understanding what has been going on for the last thirty years as a continuation of the last 3000 years of human history. Here is also the beginning of understanding what the goals are we need to reach towards collectively.

So now what?

The next milestone will be collaboratively editing this amongst a group of interested people. We need more details, more suggestions, more links to more evidence to build this case to the level of overwhelming necessity.

Are any elements of the solution more important than others?

Yes

Anything that reduces carbon emissions permanently in the shortest timeframe is important. Anything that enables that goal is important as an enabling step along the pathway.

So what's this pathway crap?

This is the path to the future that we must all walk down. It's one thing to determine the goal, the destination; it's an entirely different proposition to find the way there by the shortest possible route.

The aim of this document is to settle out the goals and determine ways to measure progress towards those goals.

The next milestone will be turning each section into the layers of the pathway. The continuing guiding principles of laying down that pathway are also found throughout explained in more detail.

- **Empathy** over Greed
- **Active citizens** over government
- **People and the Environment** over Profits
- **Small Business** over large
- **Collaboration** over individualism

Whilst there is value in everything on the right, it is never more than those on the left.