

The fall and rise of the green economy

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It is five years since the Global Financial Crisis (GFC) and its knock-on effects are still playing out in ways that are likely to have longer-term implications than those purely financial in nature; namely, its impact on the green agendas of governments and industries and the brake it has placed on an emerging green economy.

The green economy has been identified as the next major long wave of structural economic and socio-technical change at a global level (see key reference list at end of article). It can be expected to exert a more significant triple bottom line impact than that of the information economy, the last major post-industrial societal transition whose emergence accelerated through the latter half of the 20th century and continues to exert transformational change today via its links with new media and communications, the knowledge economy and the creative economy.

The drivers of a green economy are different but equally powerful and go to the heart of global sustainability in the 21st century: averting highly disruptive climate change, living within the finite resource limits of the planet, avoiding the environmental degradation currently associated with industrial and urban development, and supporting a projected nine billion populationⁱ.

The green economy is in its formative phase and can be seen to have at its *core* a portfolio of low and renewable energy technologies that has been growing over past decades to a point where they are becoming competitive with the fossil-fuel-based services (especially when Green House Gas (GHG) environmental externalities are factored in). Solar PV is a good exampleⁱⁱ. Its rapid take-up in the suburbs of Australia's cities over the past decade has been a major factor in greening the detached dwelling, a much criticised emblem of Australian cities due to its overconsumption of space and contributor to car dependenceⁱⁱⁱ. In addition, there are many other technologies and innovations that are beginning to green other sectors of the economy (eg. buildings that integrate local energy generation, stormwater and wastewater reuse and have high indoor environment quality; transport that makes use of biofuel, hydrogen and electric energy; waste minimisation and recycling) which are central to a greening of our cities which currently have ecological footprints three to four times world average^{iv}. The critical links between the green economy, green infrastructure and the sustainable city are becoming clearer..... within the context of sustainable urban development and urban regeneration (see Figure 1 overleaf).

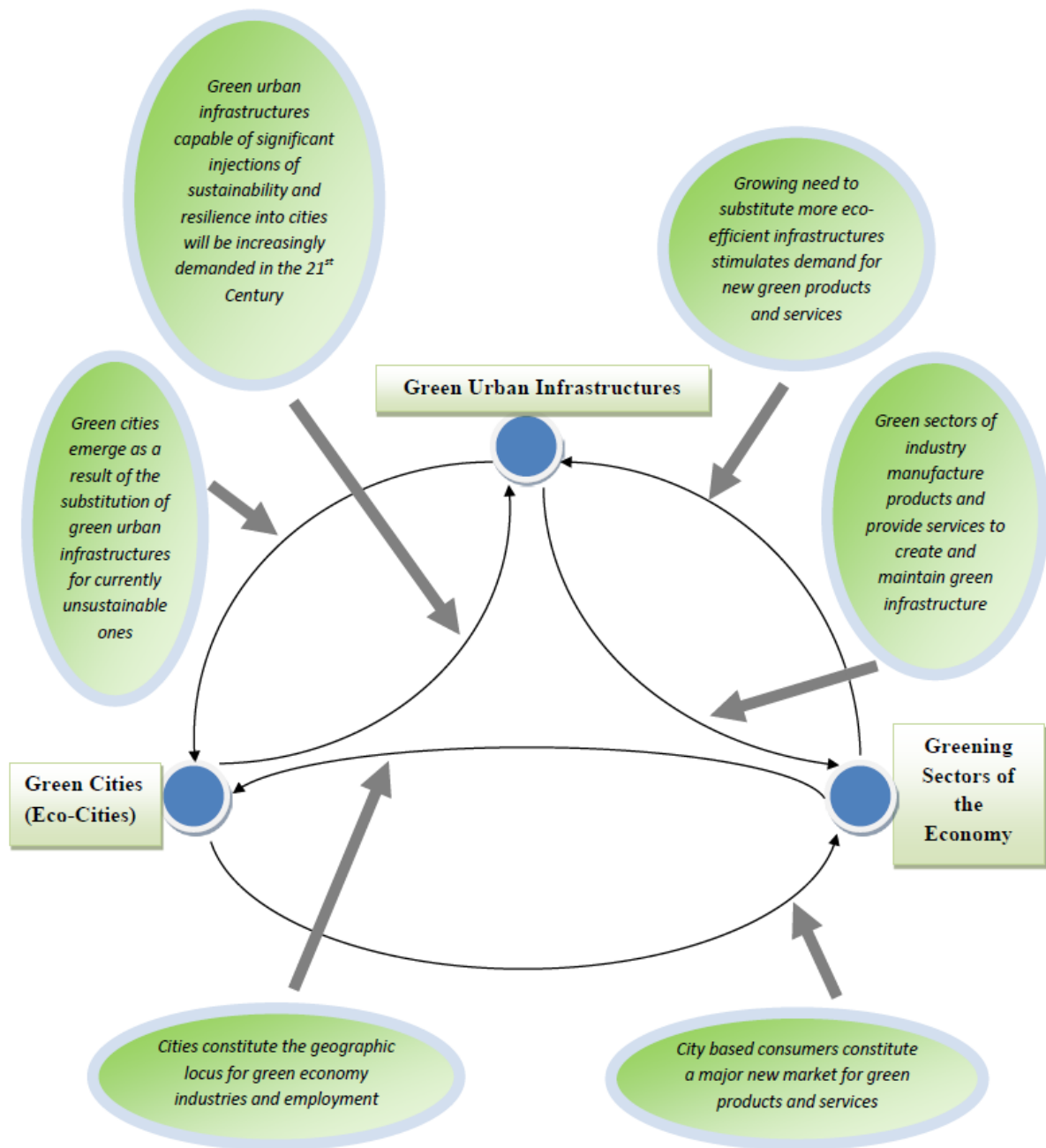


Figure 1: Critical connections: green economy, green urban infrastructure and green (eco) cities

Source: Peter Newton (2014) 'City transitions: Infrastructure innovation, green economy and the eco-city' in Pearson, L., Newton, P. and Roberts, P. (eds) *Resilient Sustainable Cities: A Future*, Routledge, London

Using Factiva as the mechanism for tracking the emergence of the term 'green economy' in the international literature^v indicates the term began to emerge as a significant topic *before* the GFC occurred (see Figure 2). The EU was a principal locus, quickly followed by the USA. China lagged a year or so. However, while there was a significant drop-off in articles on the green economy for all countries post GFC, the EU bucked the trend for the most part, with a number of key European-based agencies (eg. OECD, UNEP etc) continuing to be the principal public advocates for this industrial and societal transformation.

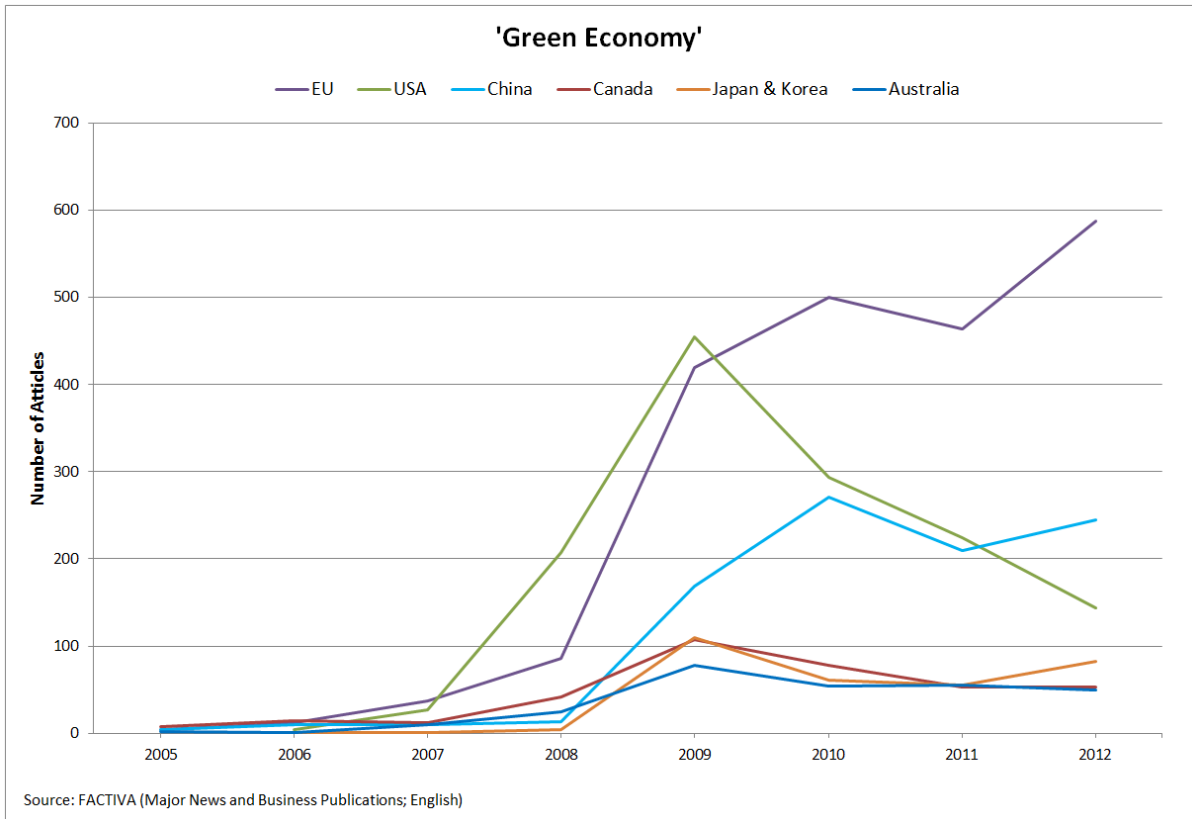


Figure 2: 'Green Economy' articles in print by year (Source: Factiva)

Over this period, more articles were being written about a 'low carbon economy' and here again, the EU was in the lead (Figure 3). Worldwide, 'climate change' had well and truly registered in the media prior to 2000 (Figure 4) but became a diminished topic once the GFC impacted.

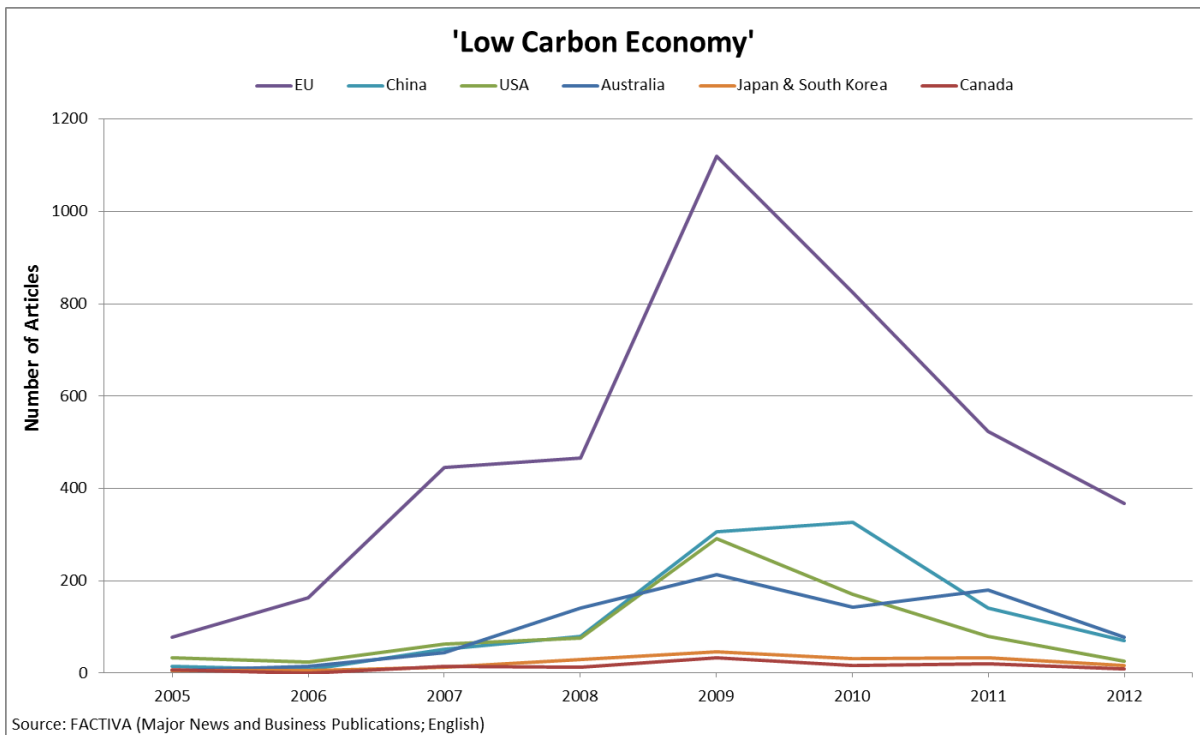


Figure 3: 'Low Carbon Economy' articles in print by year (Source: Factiva)

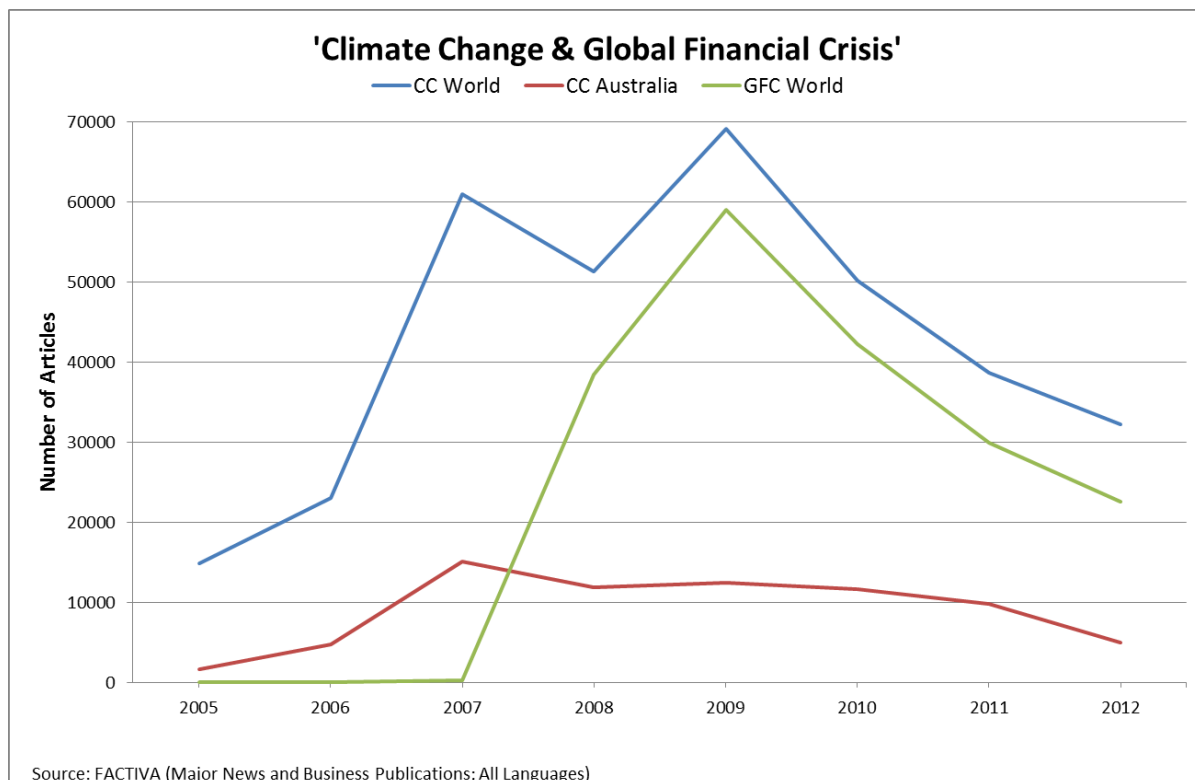


Figure 4: 'Climate Change' and 'GFC' articles in print by year (Source: Factiva)

Government response globally by developed and developing countries alike to the GFC was to pour unprecedented levels of public funds into what could be broadly classed as 'shovel ready' projects – capital works designed to stimulate employment. None could be classed as a stimulus to industry innovation and development. Many (especially European) countries overspent and precipitated a sovereign risk crisis. The response to this by many governments (reinforced by World Bank/IMF prescriptions) was the introduction of public sector austerity programs. Countries such as Australia that were in a more fortunate financial position at the time of the GFC due to a significant federal government surplus and rising demand for mining resources in China that were not subject to the GFC, now find themselves in debt and significant criticism that their pump priming was poorly targeted and wasteful. The past two years in Australia has witnessed a significant retreat by both Labor and Liberal governments on a raft of innovative programs that had clear links to a green economy platform. These include: axing housing energy efficiency program (pink batts); green housing loans scheme; green car program (hybrids); and the national carbon tax; a halving of the A\$2billion emissions reduction fund in the May 2014 budget; downgrading of solar roofs and solar towns programs; proposals to close the Australian Renewable Energy Agency and the Clean Energy Finance Corporation; and a contentious review of the 20% Renewable Energy Target (RET scheme).

Climate Action Tracker^{vi} reveals how Australia has sunk to the bottom of the list of developed countries in relation to their GHG mitigation policies and targets.

The new federal government clearly wants Australia to be more economically competitive and the Green Economy will require innovation programs that can ensure we are part of this next wave. As the GFC fades and the green economy attempts to rise again, it is worth considering where Australia stands.

How can a new agenda for a green economy in Australia be instituted? Clearly, the development and substitution of low and zero carbon energy technologies in Australia represent a core focus. But all

industry sectors should have a low carbon green economy roadmap for their business operations. A recent report for the Green Building Council of Australia^{vii} from an ARC-funded survey of over 170 senior executives of built environment industries in Australia clearly indicated that they were looking to engagement with government. Currently there is an unprecedented level of uncertainty surrounding government policy on climate change. But as Table 1 reveals, over 90% of senior managers surveyed pointed to a need for government leadership.

Table 1: Preferred government action on carbon reduction (%)

	Yes	No
Provide subsidies for clean technology investments by companies	87.4	12.6
Establish incentives for corporate behaviour that leads to low carbon business operations	87.4	12.6
Provision of information on sustainable practices for companies	87.4	12.6
Introduce a performance standard/label for all energy generation technologies	85.7	14.3
Provision of education on green practices for consumers	85.7	14.3
Establishment of national carbon emission reduction goals	84.0	16.0
Subsidies for clean technology usage by consumers	82.4	17.6
Establishment of environmental reporting standards for business	72.3	27.7
Link to an international carbon pricing scheme	67.2	32.8
Introduce carbon labelling for all manufactured products	62.2	37.8
Carbon cap and trade scheme	55.5	44.5
Current federal government carbon pricing scheme	52.1	47.9
Establishment of penalties for lack of carbon efficiency compliance by companies	50.4	49.6
Corporate tax on carbon footprint of business operations	43.7	56.3
Consumer/sales tax on carbon footprint of goods/services consumed	39.5	60.5
Establishment of penalties for lack of carbon efficiency compliance by consumers	34.5	65.5
None of the above. Government can help most by doing nothing and letting the market come up with solutions	9.2	90.8

Source: P. Newton and P. Newman (2013) *Low Carbon Green Growth: Tracking Progress in Australia's Built Environment Industry Toward a Green Economy*, report for the Australian Research Council in collaboration with the Green Building Council of Australia, Infrastructure Partnerships Australia, Infrastructure Sustainability Council of Australia and Engineers Australia, Melbourne^{viii}. Note: based on 119 responses

Leaders in this industry sector understand that to be successful and sustainable into the future, their businesses will need to demonstrate green economy credentials and innovations that are not inhibited by shifts in government policy dictated by industry lobbies linked to the protection of a fossil fuel-based economy. The uncertainty surrounding the future of the RET on investment in renewable energy technology is but one example. More generally there is a lack of action by the federal government in relation to future innovation or industry policy – both critical in shaping longer-term private and public investment strategies^{ix}. The new Direct Action Plan (DAP) does indeed offer potential for green economy innovation that could enhance the global competitiveness of Australian industry – *if* it is accessible across all sectors of industry, *and* has an appropriate budget. The approach taken by most nations to lowering carbon emissions has been at the front end of the economy (power plants and big industry) but the DAP permits end user involvement. Built environment innovations have not been able to link to programs like the Clean Energy Program. However, it now may be able to create an accreditation process for innovative low carbon buildings and precincts that rewards the innovative developer. This will offer a chance for Australian urban developments to trial the best in energy saving, renewable energy and low embodied energy buildings. It would be worth a try.

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ⁱ <http://www.routledge.com/books/details/9780415816212/>

ⁱⁱ <http://theconversation.com/how-will-your-energy-get-greener-depends-where-you-live-17839>

ⁱⁱⁱ <http://www.mdpi.com/2071-1050/5/6/2537>

^{iv} <http://www.tandfonline.com/doi/full/10.1080/10630732.2012.626703#.UqfO33lxV8E>

^v Factiva is an on-line tool that aggregates searchable content from over 10,000 licensed sources such as newspapers, journals, magazines, TV and radio transcripts and newswires

^{vi} <http://www.climateactiontracker.org/>

^{vii} <http://www.gbca.org.au/resources/industry-publications/low-carbon-green-growth/35010.htm>

^{viii} http://www.gbca.org.au/gbc_scripts/js/tiny_mce/plugins/filemanager/Low_Carbon_Green_Growth_BE_Report_16Sept.pdf

^{ix} also see Nicky Phillips "Research crippled by lack of vision", *The Age*, 31 May 2014