Green Growth: Realising a transformational economy through enterprise, innovation and education

Green growth and innovation are at the heart of Sustainable Business Australia and we welcome the opportunity to speak on this topic.

The global economy is in recovery, albeit a timid one, but the signs and forward projections are good in the US and Europe particularly. Worldwide, the middle class is expanding by an estimated 100 million per year and the quality of life for millions in Asia and Africa is growing, with an increasing reliance on technology in recent years.

In Australia, the productive yield of our historically most successful exports – coal, wheat, sheep, ore – are reliant on our natural resources which are all experiencing unprecedented impacts and challenges. They are not infinite.

Australia, along with the rest of the world, is now faced with a conundrum: how do we innovate to drive growth without creating bubbles and causing widespread prosperity, and without consuming more natural resources than we can afford or regenerate?

This conundrum is driving governments, business leaders and civil society across the world to think differently about how they will achieve sustainable growth. This thinking has leading economic think-tanks and international agencies, like the UN, OECD and the IMF, calling for a transition to a global economy that maximizes well-being, operates within environmental limits and is capable of coping and adapting to global environmental change - a “global green economy.”

Economies, business models & jobs are in transition

The concept of a green economy brings with it the promise of a new economic growth paradigm that is responsive to the earth’s ecosystems and can also champion human development. The rationale for this transition includes policies, programs and market-based mechanisms that will assist the deployment of renewable resources, energy conservation and technologies for sustainable future development. Sustainable systems of production and consumption are already being achieved through technology and innovation.

However, the scale and pace of investment, innovation, technology development and employment creation required is beyond the capacity and responsibility of governments alone. Many in the corporate world view with a growing unease the fluctuating dynamics of

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1 Hajkowicz SA, Cook H, Littleboy A. (2012) Our Future World: Global megatrends that will change the way we live. The 2012 Revision. CSIRO, Melbourne
today’s business landscape and the uncertainty over the path forward. At the same time, a
growing business momentum is starting to recognise and address this complexity by viewing
the synergies that prevail over the trade-offs.

They are doing this by incorporating sustainability factors, such as cutting-edge sustainability
technology, into their corporate plans and KPIs and exploring other innovative ways and
opportunities that will ensure not only the survival and sustainability of their businesses, but
that they are either ahead or at least up to date with their global peers.

Asia’s Environment can be Australia’s Future

As we all know, China’s economic boom of recent years has led to boom times for Australia’s
natural resources, such as iron ore, coal and copper.

This has led to what some in academic and business circles have termed “China's energy or
growth trilemma: resource scarcity, environmental protection and economic growth.”

The Chinese government has been increasingly concerned by effects of environmental
disasters and threats to public health, often the result of the country's breakneck industrial
expansion and mass migration to new cities. Smog over northern cities in January and the
discovery in March of thousands of rotting pig carcasses in a river that supplies Shanghai's
water, indicate some urgent environmental policies and actions may be required.

China’s cabinet, the State Council, said in early August that environmental protection would
be elevated to a "pillar industry" that would receive government support in the form of tax
breaks and subsidies. There are now plans to accelerate investment in technology to save
energy and tackle the dire pollution blamed for a series of health crises that have generated
widespread public anger.

Australia stands to benefit from its established and growing relationships in Asia into the
future, as green Australian businesses develop partnerships to develop and market
Australian energy-saving green products to Asian markets.

With rapid urbanisation in emerging countries where green infrastructure and construction
projects are required, many commercial partnerships will become available for Australian
construction and engineering businesses that use sustainable processes, products and
equipment.

Australian businesses already have a competitive edge due to their recognised leadership in
ecologically sustainable design initiatives and building green, according to a recent Global
Real Estate Sustainability Benchmark report. For example Grocon's Pixel Building, in
Melbourne, Victoria, was acknowledged as the first carbon neutral office building of its kind
in Australia, when it received the world's highest Leadership in Energy and Environmental
Design rating by the US Green Building Council.

On the topic of innovation in skills training, Australia’s international education sector is very

active in China, tailoring its activities to suit demand. For example, responding to the growing push in China for green skills and sustainable development, TAFE Directors Australia and the China Education Association for International Exchange jointly sponsored and managed a Green Skills forum in Beijing in late 2012.

**Business and the Innovation Quotient**

“...[s]mart companies now treat sustainability as innovation’s new frontier.”

Knowledge and innovation are key success factors for adding value and achieving sustained growth in an increasingly complex and globalised economy. Overseas, a growing number of corporations are re-evaluating the challenges by utilizing the sustainable development agenda as a “design brief” for their innovation laboratories.

Companies in emerging countries have numerous reasons to develop robust sustainability agendas, which in turn will drive a need for environmental goods and services and a need to address environmental degradation, such as a lack of clean water and other forms of pollution, in the areas where they operate.

**Size of the Eco-Innovation Skills Market**

While the market for environmental goods and services is already very large, eco-innovation presents interesting growth perspectives for an increasing number of Australian businesses, thanks to a wide variety of niche market opportunities. It is comparable in size to the pharmaceutical and aerospace sectors, and demand is expected to significantly grow in the near future.

In 2006, the global market for environmental goods and services was valued at US$690 billion, with some analysts expecting it to rise to US$1.9 trillion by 2020 and it is now recognised that environmental services, in sectors such as tourism or energy production, can deliver both economic and social benefits. Within the environmental industry, services represent the most important component, accounting for 65 percent of total market value.

And as companies place increasing emphasis on environmental practices, the skills required in the workplace will inevitably change. While there are obvious green jobs such the air-quality engineer, system installer, energy auditor and architect and designer, there is an ever increasing span of jobs that blend green skill sets with traditional ones.

According to published research by British Gas in March 2013 over half of the UK’s young people (19-25) say they are interested in working in the green economy but many feel they don’t have the skills to get a job in the sector. A quarter of young people (26%) don’t feel the training and job opportunities currently on offer do enough to help develop skills they can use throughout their career. The research of more than 1,000 young people shows they see the green economy as a route into secure, long-term employment. More than three-

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quarters (78%) say they recognise the importance of the green economy to the UK’s growth over the next ten years.

**Government as a Skills & Innovation Incubator**

“Green jobs are not a myth, not a failed initiative, they simply got mixed up with a failed economy.”

Government support is critical to transforming a national system of innovation and skills training.

Policymakers at all tiers of government need to maintain the progress that enabling the right legislative frameworks and finance mechanisms can deliver, particularly if Australia’s small and medium-sized enterprises are to play a major role in a transition to a green economy. And there is emerging evidence of this already occurring overseas. For example, the United Kingdom’s Green Deal 10 alone is expected to create 250,000 jobs in areas such as energy efficiency, renewable energy and water conservation by 2030.

In early June 2013 the US Environmental and Energy Study Institute 11 released a fact sheet on energy efficiency and renewable energy jobs. It references the US Bureau of Labour Statistics' green jobs definition 12 and their calculation of 3.4 million green jobs in the US in the fourth quarter of 2011. National and state figures from different sources reinforce the bottom line that in 2012 alone, there were over 110,000 jobs created in the US clean energy sector.

Also, green skills training are being blended into other educational programs in the United States. Hudson Valley Community College has embedded two new PV courses that can be taken as part of their existing Associate in Occupational Studies two-year degree program. Lane Community College created a Renewable Energy Technician option as part of its two-year Associate in Applied Science Degree program for energy management technicians. Trade apprenticeship programs add to their core training advanced-training options such as photovoltaics.

Interestingly, nearly half of job openings in Canada linked to the green economy require between five and 10 years’ work experience. In the report 2013 Sustainability Occupational Study: Current Job Trends and Future Growth 13, Environmental Careers Organisation, ECO Canada, reported that the vast majority (98 per cent) demanded some post-secondary education. The type of worker the market is looking for is also changing. People, who are open-minded and have the ability to self-educate are going to be highly prized and valued.

**Conclusion**

The greening of economies, in Australia, across the region and on a global scale, represent a new engine of growth as well as for growth – one that can serve as both a net generator of jobs and a vital strategy for reducing carbon emissions, enhancing energy efficiency, and preventing the loss of biodiversity. Further green jobs do add up and contribute to a rebounding and robust economy.

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10 [http://www.greendal.co.uk](http://www.greendal.co.uk) [Accessed 27 August 2013]
And even in uncertain times, Australian business is developing sustainability strategies and technologies and the knowledge to be part of the agenda that can restore the planet and ensure sustainable, developed lifestyles for future generations.

Innovation will play a large part in achieving the sustainability goals of a green economy, which will in turn provide major opportunities for Australian businesses and jobs.

Sustainable Business Australia considers that we can and must develop a successful economy, a transformational economy through education, and research and knowledge-driven industries, namely the high-value added, growth-focused industries of the future.

Key business drivers need to include resilience and adaptability to embrace complexity.

Australia is well on the path towards a green economy and already in the technology and innovation age.

The task ahead is to find opportunities for innovation, collaboration, commercial agreement and potential investment – and implement the best of them.

Innovative enterprises will be the key sustainable businesses of the 21st century and beyond.