Australia Country Report – Growing Green and Decent Jobs

1. Country Profile

Australia has experienced strong and sustained economic growth over the last two decades. More recently, the economy has continued to perform well despite challenges posed by natural disasters (in Australia and key trading partners), the global financial crisis and the situation in the Eurozone. The Australian economy's long-term average rate of real GDP growth is around three percent.

The multi-speed economy phenomenon is very real in Australia. The terms of trade hit a new record high in the December quarter of 2011. This is well over double the level of the early 2000s, and they are expected to remain very high. The dramatic increase in the terms of trade, as a result of strong global commodity process, has been accompanied by an appreciation in the value of the Australian dollar. This has placed pressure on non-mining, trade-exposed sectors of the economy, notably manufacturing.

Investment spending has continued to boom, with capital expenditure reaching a new high, as a proportion of GDP in 2011now around 30 percent of GDP.

The labour market recovered strongly from the 2008-09 downturn, with some weakening in 2011 as macro-economic conditions became less favourable. This slowing in growth is due to factors including a strong Australian dollar, the effect of the European and US recessions on confidence and exports, the shift by Australian consumers towards deleveraging and saving, and natural disasters in Australia and key trading partners (Japan and New Zealand).

The unemployment rate (at 5.2% in February 2012) remains among the lowest recorded in Australia for decades. Unemployment has fallen for all age groups other than persons 55 and over, for whom the rate has changed slightly. The underemployment rate has also fallen for all age groups other than 35-44 year-old persons. The unemployment rate is lower than most other advanced economies, and virtually all major advanced economies. When the financial crisis began in 2008, unemployment was lower than in most of the OECD and rose far less severely than elsewhere, stopped rising earlier than most other developed nations, and is closer to its pre-crisis level than in the major advanced economies.

Despite faring better during the global financial crisis, long-term unemployment has increased. People lose work, or enter the labour force and cannot find work, due to macroeconomic conditions; after a period of being unemployed, they may become less attractive to employers and/or their skills may become less valuable. The increase in long-term unemployment has been modest and remains extremely low relative to its historical levels.

The rate of productivity growth has slowed over the past decade. Australia experienced a productivity surge in the 1990s, with the productivity growth rate outstripping the rest of the developed world, and then began to fall from the late 1990s. There are a number of potential explanations for the long-term productivity slowdown including the effects of the mining boom, and the effects of an OECD-wide slowdown in the rate of productivity growth. Underinvestment in infrastructure and skills are important factors, as is managerial complacency about productivity in the face of the rising profits, share of national income and record terms of trade. There have been signs of aresurgence in productivity growth, with labour productivity increasingly strongly in late 2011.

Although productivity growth has been somewhat sluggish, real wages have still failed to keep pace. A corollary of falling real unit labour costs is a falling wages share of national income. Wage share of total factor income is now 52.6 percent; this is close to the lowest level that the wages share has reached since the 1960s.

It does not necessarily follow that a falling wages share implies a rising profits share. However, the profits share of national income has risen strongly in recent years. It is now close to the all-time record high recorded prior to the financial crisis at 29.3 per cent (Sept 2011 quarter).

In recent years, annual growth in average weekly ordinary time earnings for full-time adults has fluctuated around its decade-long average. The wage price index is also around its decade-long average. Wages data shows considerable divergence between growth rates across industries. This is typical in a diverse and dynamic modern economy. Mining has enjoyed robust conditions and as such seen solid increases in wages. Others facing more challenging conditions have seen wages grow more slowly. Award wages, which set the minimum rates for Australian employees, have been relatively stable over time in real terms. They have generally risen in line with inflation. Indeed, the real value of the wage for the lowest classified award employee has only increased by one percent since 2005.

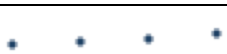
Over the past decade, minimum wages have fallen relative to average wages and median wages. Currently, the minimum award wage for the least skilled workers is around $15.50 per hour for adults (and as little as $7 per hour for young workers, trainees and apprentices). This is significantly below average wages, which are around $35 per hour. As a result, the relative living standards of low-paid workers have fallen in recent years.

The magnitude of wealth inequality and income disparity is growing in Australia. The latest data (2009-10) shows that the wealthiest 20 percent of Australians own 62 percent of the nation's wealth. The poorest 20 percent own just one percent. The share of total wealth that is owned by the wealthiest Australians has grown over time.

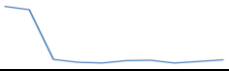
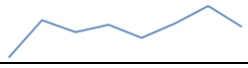
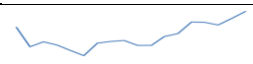
Furthermore, the Australian labour market is increasingly characterised by insecure and precarious work. Overall, it is estimated that up to 40 percent of the workforce faces insecurity at work, because of the lack of a 'guaranteed' safety net that applies to all workers, equally. Insecure work has profound implications for the quality of working life. Many working families are feeling a growing sense of economic insecurity, in the form of unpredictable incomes, precarious working arrangements and rising costs of living. Out of the 10.3 million workers in Australia:

- 3.5 million people work in small business, and so have fewer dismissal rights, and no entitlement to severance pay in the event of redundancy;
- 2.2 million employees are classified as casual, and so either are denied rights to sick leave, annual leave, long service leave, etc., or (in the case of 'casuals' who have ongoing jobs, and predictable rosters) erroneously think they do not have these rights, and are wrongly denied them;
- 1.1 million workers are contractors, and so either have no protections or (in the case of the perhaps 450,000 'sham' contractors) think they have no protections and are wrongly denied them;
- Between 200,000 to 500,000 workers are outworkers, and either have no legal protections, or else rely on State and Territory laws for basic protections;
- 275,000 employees have fixed-term contracts, and so have no protection from a capricious or unfair decision not to renew their contract; and
- 131,400 employees are labour hire workers, and have no guarantee that they will not be unfairly dismissed (by being removed from a placement, at the host employer's insistence).

Australia is almost unique amongst developed countries in terms of the extent of the problem. In particular, most other systems do not have the concept of a 'casual', that is to say a person who is a formal employee, recognised by the law, yet who is denied the normal range of employment protections, and who is therefore treated as a 'second-class' worker by the law.

Key Indicators	Var	Initial	Trend	Latest
GDP per capita, PPP (constant 2005 international $)	▲43%	23,979 (1990)		34,259 (2009)
Energy use (kg of oil equivalent) **per $1,000 GDP** (constant 2005 PPP)	▼17%	211 (1990)		175 (2009)
CO_2 emissions (metric tons per capita)	▲1%	17.2 (1990)		17.3 (2009)
Unemployment, total (% of total labor force)	▼19%	6.9 (1990)		5.6 (2009)
Electricity, Gas and Water Supply employment	▼18%	105,600 (1990)		86,234 (2007)
Construction employment	▲76%	592,600 (1990)		1,042,500 (2010)
Transport, Storage and Communications employment	▲11%	531,800 (1990)		678,598 (2010)
Manufacturing employment	▼17%	1,178,600 (1990)		983,500 (2010)
Agriculture employment	▼17%	424,200 (1990)		354,000 (2010)
Hours actually worked (employees, men & women)	▼3%	37 (2000)		36 (2010)
Earnings per hour – Dollar (employees, men & women)	▲29%	20 (2000)		26 (2006)
Compensated injuries (total)	▼20%	129,032 (1999)		98,950 (2008)

Labour market indicators per sector

MANUFACTURING	Var	Initial	Trend	Latest
Gross Value Added (constant $2005)	▲38%	6.06E+10 (1990)		8.35E+10 (2010)
Hours actually worked (employees, men & women)	▼0.8%	38 (2001)		37.7 (2008)
Earnings per hour – Dollar (employees, men & women)	▲39.6%	18.16 (2001)		25.4 (2006)
Compensated injuries (total)	▼61%	29,310 (1999)		11,410 (2008)
CONSTRUCTION	**Var**	**Initial**	**Trend**	**Latest**
Gross Value Added (constant $2005)	▲131%	2.61E+10 (1990)		6.05E+10 (2010)
Hours actually worked (employees, men & women)	▲1.3%	37.8 (2001)		38.3 (2008)
Earnings per hour – Dollar (employees, men & women)	▲33.8%	18.19 (2000)		24.3 (2006)
Compensated injuries (total)	▼3.1%	11,775 (1999)		11,410 (2008)
TRANSPORT (transport, storage and communication)	**Var**	**Initial**	**Trend**	**Latest**
Gross Value Added (constant $2005)	▲143%	2.93E+10 (1990)		7.13E+10 (2010)
Hours usually worked (employees, men & women)	▼1%	38.5 (2001)		38.1 (2008)
Earnings per hour – Dollar (employees, men & women)	▲31%	20.4 (2000)		26.8 (2006)
Compensated injuries (total)	▼18%	12,035 (1999)		9,420 (2008)
ENERGY	**Var**	**Initial**	**Trend**	**Latest**
Gross Value Added (data includes Mining, Manufacturing & Utilities - constant $2005)	▲53%	1.07E+10 (1990)		1.63E+11 (2010)
Hours usually worked (employees, men & women) – Electricity, Gas & Water supply	▼4.6%	38.6 (2001)		36.9 (2007)
Earnings per hour – Dollar (employees, men & women) – Electricity, Gas & Water supply	▲42.4%	22.2 (2000)		31.6 (2002)
Compensated injuries (total) – Electricity, Gas & Water supply	▼49.7%	915 (1999)		460 (2008)
ENVIRONMENT (Other indicators)	**Var**	**Initial**	**Trend**	**Latest**
Forest area (% of land area)	▼3.4%	20.1 (1990)		19.4 (2010)
Arable land (% of land area)	▼8.1%	6.2 (1990)		5.7 (2008)
Renewable internal freshwater resources per capita (cubic meters)	▼17%	28,122 (1992)		23,348 (2007)
CO2 emissions (metric tons per capita)	▲1%	17.2 (1990)		17.3 (2009)
Fossil fuel energy consumption (% of total)	▲1%	93.9 (1990)		94.8 (2008)

2. Choosing sectors with strong economic, employment, social and environmental potential

Among developed nations, Australia has one of the highest CO_2 emissions per capita. In 2008, CO_2 emissions per capita reached 18.5 metric tonnes. Overall, total emissions have increased by approximately 30 percent on net emissions recorded in 1990.[1] If Australia were to take no action to reduce emissions, Australia's emissions could increase by 20 percent (on 2000 levels) by 2020.

Four sectors were prioritised by the study: energy, construction, manufacturing and transport. Each has the potential to contribute to Australia's emissions reduction while promoting job creation.

The stationary energy sector was the largest source of greenhouse gas emissions in 2009, comprising 51 percent of total net emissions. This is 51 percent above 1990 emissions.[2]

The 2004 IPCC report identified existing commercial building stock as holding the single largest potential of any sector to reduce greenhouse gas emissions (at the lowest average cost of abatement) by improving their energy efficiency. In Australia, buildings (both commercial and residential) account for approximately twenty percent of Australia's carbon emissions; and in the commercial building sector, energy use increased by 86 percent between 1990 and 2006. Analysis demonstrates that there are low cost energy savings opportunities in the existing building stock.[3]

In 2009, direct emissions from manufacturing amounted to about 12 percent of total Australian emissions. Furthermore, almost one-third of the emissions from electricity generator were associated with electricity use in manufacturing (almost equivalent to direct emissions).[4] The *Energy Efficiency Opportunities* program has identified opportunities to save energy in 207 of the largest emitting corporations with reporting obligations under the program equivalent to two percent of Australia's greenhouse gas emissions. Over a third of reporting corporations are manufacturers.

Transport emissions accounted for 14 percent of Australia's emissions in 2009, with road transport accounting the largest proportion of emissions in this sector. Between 2009 and 2020, transport emissions are projected to increase by 16 percent due to increases in transport activity (linked to economic and population growth).

3. Analysis of key impacts of green investment in the sectors analysed

This study concentrated on understanding what the potential impact on employment could be of investing 2% of the annual GDP of Australia in transforming the four economic sectors discussed above: energy, construction, manufacturing and transport.

While the 2% investment scenario indicates the potential amount of jobs created in the economy (with emphasis on the sectors analysed), the per USD value provides more useful information for a cross-sector comparison. In fact, it is difficult to evaluate whether the investments simulated in 2% scenario are consistent with current capital formation in Australia due to data limitations (primarily consisting in the availability of investment figures, which are normally aggregated differently than in our study). It can however be said that energy and construction investments are more in line with historical data than manufacturing and transport are.

Two sets of results are presented below (the methodology has been described in the technical appendix). Table 5 includes an estimation of the total potential job creation resulting from the annual investment of 2% of GDP in green interventions in the four sectors analysed, and Table 6 presents the job creation per USD invested by sector. All monetary values are presented in USD and local currency.

Table. Aggregated impacts of green investments amounting to 2% of GDP:

Investment USD	Investment local currency (LC)	1 yr Job creation	Share of employment	Average Jobs per Mn $ invested	Average Jobs per Mn LC invested
$10,962,013,810	10,304,292,981	135,868 – 183,821	1.3% - 1.7%	12 – 17	13 – 18

[1] http://www.climatechange.gov.au/~/media/publications/greenhouse-acctg/national-inventory-report-2009-vol1.pdf
[2] http://www.climatechange.gov.au/~/media/publications/projections/australias-emissions-projections-2010.pdf
[3] See ClimateWorks, 'Low Carbon Growth Plan for Australia', available at http://www.climateworksaustralia.org/Low%20Carbon%20Growth%20Plan.pdf, 2010.
[4] http://www.pc.gov.au/__data/assets/pdf_file/0003/109830/carbon-prices.pdf

Table. Sectoral impacts of green investments:

	Energy	Construction	Manufacturing	Transport
Investment Shares	30%	30%	20%	20%
Job creation	13,901 – 18,807	50,762 – 68,679	15,168 – 20,522	56,036 – 75,814
Jobs / Mn $	4 – 6	15 – 21	7 – 9	25.6 – 34.6
Jobs / Mn LC	4 .5– 6.1	16 – 22	7– 10	27 .2 – 36.8

Legislation for the Clean Energy Future (CEF) Package to drive emission reductions in Australia was passed in November 2011. The CEF Package is an emissions trading scheme (with a three-year fixed price period) will begin on 1 July 2012. The ETS will cover stationary energy, industrial processes, fugitive emissions, and emissions from non-legacy waste.

The carbon price alongside key complementary measures will drive a change in how energy is produced and used in Australia. For the first time in Australia, there will be a long-term signal to reduce emissions in the energy sector. The Clean Energy Future package also includes the establishment of a $10 billion Clean Energy Finance Corporation to invest in the commercialisation and deployment of renewable energy, energy efficiency and low pollution technologies. The Government has also committed to a tender process for payment to closure of around 2,000 megawatts of very highly emissions-intensive coal-fired generation capacity by 2020.

This will complement existing policy, including the Renewable Energy Target (RET), which has been in place since 2001. The RET scheme was expanded in 2009 to mandate that 20 percent of Australia's electricity supply will be sourced from renewable energy in 2020. As of 2010, Australia generated around 21,000 GWh of electricity from Renewable Energy Sources (RES). Since 1 January 11, the RET has been separated into two parts, the Small-scale Renewable Energy Scheme (SRES) and the Large-scale Renewable Energy Target (LRET). Combined, these two parts are to deliver more than 45,000 GWh target in 2020. While all generation technologies will expand in the forthcoming years (including modest biomass and hydropower expansion), most of the increase will result from large scale technologies like new wind and geothermal generation.

Alongside the carbon price, the Government is considering the introduction of a national energy savings initiative that could cover residential, commercial and industrial sectors. As noted above there is significant abatement opportunity in the commercial building stock while also creating jobs in energy efficiency retrofits. There is also a very significant market opportunity, and job creation, for Australian manufactures to provide energy efficiency goods for retrofits.

To improve energy efficiency and reduce emissions, the Clean Energy Future package allocated $1.2 billion to a Clean Technology Program designed to help improve energy efficiency in manufacturing and support R&D in low pollution technologies.

Prior to the introduction of the CEF package, the Government introduced a Carbon Farming Initiative in 2011. It is a carbon offset scheme that allows farmers and land managers to earn carbon credits by storing carbon or reducing greenhouse gas emissions on the land. As part of the Clean Energy Future Package, the Government will also establish a Biodiversity fund (of approximately $900 million over six years) to support landholders to undertake projects that establish, restore, protect or manage bio-diverse carbon stores. The response to emissions from the land sector presents real opportunities to develop economically viable industries and employment *on country* for Aboriginal and Torres Strait Islander people while respecting and maintaining customary land management activities. To maximise opportunities, it is essential that Aboriginal and Torres Strait Islander peoples are supported through appropriate training and development support.

Under the Clean Energy Future package, transport fuels are excluded from the carbon price mechanism. However, an equivalent carbon price will be applied to domestic aviation, domestic shipping, rail transport, and non-transport use of fuels through changes in fuel tax credits or excise. Changes will not apply to fuel used by households for transport, light on-road commercial vehicles, and off-road fuel use for agriculture, forestry and fishing industries. The Government plans to apply a carbon price to heavy on-road transport from 1 July 2014.

4. Making these jobs decent & investments sustainable

The Clean Energy Future Package is a significant investment in the clean energy economy. Now the priority is maximising the abatement and decent work opportunities from relevant policies and programs.

Shift to Low Carbon and Renewable Energy

Previous restructures of the energy sector have not resulted in decent work for energy sectors workers. Therefore, workers and communities in regions where the 2000 megawatts of very highly emissions-intensive coal-fired generation capacity will be closed need to be supported. Economic diversification plans that support workers are needed as economies shift away from dependency on fossil fuel generated electricity. Informed and well-designed planning, taking into account the existing skills profile of the workforce, is needed to minimise the negative impact of economic restructuring. The government at regional and state level must consult at a regional and state level with communities and trade unions in planning and throughout the restructuring.

Maximising Manufacturing Jobs

Much of the fabrication work and machinery and equipment production work for clean energy technology is or can be done in Australia, and by traditional manufacturing firms. This is consistent with the trend internationally for existing manufacturing firms to diversify and fundamentally re-tool and change to move into clean energy technologies. This is important for maintaining a robust manufacturing industry in Australia and supporting employment.

In addition to the Clean Technology Program, industry policy can assist by including funds for research and development; mechanisms to overcome market barriers and leverage private investment in clean energy innovation throughout commercialisation, trialling, demonstration at proof of concept stage, and early stage commercial development; the development of a strong venture capital markets that supports the commercialisation of clean technology development manufacturing of those products in Australia; and investment in training and skills development to increase the absorptive capacity of businesses to change, adopt and innovate.

It is essential that a number of regulatory and investment barriers that currently inhibit the deployment of clean energy technologies and low-cost pollution abatement opportunities be addressed. This includes reform of the National Electricity Market to support investment in demand-side measures and to provide greater fiscal investments in energy efficiency, distributed generation and demand management.

Skills and Training

The transition to a low-pollution economy will have implications on the demand for jobs and skills within and between sectors of the economy. Effective and resourced planning is needed to identify emerging workforce trends and the impact on employment as well as changing skills and training priorities.

Identifying skills and training priorities by geographic location – and linking this work to regional development plans – is important for informing industry-wide and cross-industry responses to skills planning which minimises skills shortages, and identifies opportunities to transfer skills and move across sectors as opportunities emerge.

Re-training in clean energy technologies is also essential for ensuring new technologies are safely adopted, and workplaces meet best practice occupational health and safety standards. It also requires a commitment by workplaces to strong safety standards, and oversight and enforcement of standards in workplaces. In Australia, trade unions have been actively involved in the development and monitoring of occupational health and safety standards. Trade unions should continue to play this role.

5. Conclusion

In 2011, Australia trade unions welcomed the legislation of the Clean Energy Future package. Now, the focus must be on creating decent work opportunities while reducing emissions. Therefore, trade unions need a seat at the planning table to ensure:

- Development plans for regional economies that will undergo restructuring as a result of the closure of emissions-intensive coal-fired generation capacity include effective support for workers and their families. This relates to identification of replacement energy and associated job opportunities, planning for the ongoing job security of workers, and the provision of a range of funded assistance measures for workers.
- Investments in clean energy technologies funded under the Clean Energy Future package maximise employment opportunities by including rules for local industry participation. Guidelines should be consistent with existing Commonwealth Australian Industry Participation policy. Furthermore, large projects should be designated strategic projects and have local content policy set by Government.
- The design, roll out, and complementary industry policy of a national energy savings initiative maximises the job creation opportunities and provides up-skilling for workers so that workers can undertake energy efficiency projects safely.
- Workers are supported to access employment opportunities in expanding sector or by identifying opportunities where skills are directly transferable through up-skilling and re-training.